I. Course Description

This course will provide you with an introduction to descriptive and inferential statistical methods that are used by health care organizations with respect to their operations and strategic planning functions. Basic epidemiological concepts will be introduced and will serve as a primary context for applications of the statistical methods.
II. Course Prerequisites
Although this course does not have any formal prerequisites, it is important that you are comfortable with mathematics (including basic algebra), as well as Microsoft Excel, PowerPoint, and Word.

The course does not assume any prior training in statistics. However, given that this is a graduate-level course, the material will be presented at a faster pace and in greater depth than a comparable undergraduate course.

III. Course Goals and Objectives
- To recognize the value of data-based decision-making in health care organizations, particularly as it relates to population health assessment.
- To identify and interpret patterns in raw data using both graphical and non-graphical methods.
- To understand fundamental probability concepts and their relationship to inferential statistical methods.
- To perform inferential statistical analyses, including hypothesis testing and confidence interval construction and to be able to apply these methods to prevalent issues in health care management.
- To understand the concept of regression analysis and its application to predictive modeling and forecasting.
- To be proficient with utilizing Excel and STATA statistical software to conduct data analyses with population-based and organization-based health care data.
- To gain experience in organizing and presenting empirical data analyses to management-focused audiences.
- To engage in peer learning through collaborative, critical thinking about data-based, analytical strategies to address administrative problems frequently encountered by health care organizations.

IV. Methods of Instruction and Work Expectations
Instructional methods include the following:
- Weekly lessons and recitations
- Text and handout readings
- Problems (self-study and recitation)
- In-class exams
- Assignments using Excel and STATA

This is a rigorous, graduate-level course. In addition to the required 3 hours of weekly lecture and 1 hour of recitation, you should plan to spend at least 6-8 hours per week outside of class to achieve mastery of the material.


Required Textbook:

The text is available at the University of Minnesota Bookstore in Coffman Union on the Minneapolis Campus (http://www.bookstores.umn.edu/shopping/textbooks.html). You can also purchase it online.

Lessons: PowerPoint slides and other materials will be posted on the course website prior to each Thursday class period. Please make sure to print off a copy of the slides before coming to class or plan to use them interactively on your computer during lessons. Lessons will include both lecture and interactive tasks.
Recitations: Effective learning and mastery of statistics requires a lot of practice. Recitations are mandatory and are designed to review the prior lesson’s key concepts through discussion as well as presentation of problems and empirical data analyses. You are expected to have attempted the recitation problems prior to the designated meeting time.

Articles and Handouts: These will be made available to you in advance of the class period. You should plan to read assigned articles or handouts prior to class.

Problems: Having taught this course for several years, it has been my experience that the best way for students to master statistical concepts is to apply them to problems, both “textbook” and data-based ones. Problems will be posted each week and will include:

Self-study problems: These problems will vary in difficulty level and enable you to check your mastery of the material presented during the lesson. Answers will be provided so that you can check your work.

Recitation problems: Each week there will be 2-4 recitation problems. These problems are designed to help you synthesize multiple concepts. Many of these questions are taken from prior years’ exams. Additional emphasis will be placed on the presentation and interpretation of results to facilitate decision-making.

Statistical Software: Two software packages will be used.

(1) Excel. You can order it from the University of Minnesota Bookstore if necessary. Any version that is 2007 or later is fine. Please make sure that you have the Data Analysis Add-In loaded (it requires a few steps once Excel is opened). The textbook provides good instruction for how to use Excel.

Please note that Excel is not particularly well-suited for use on Macintosh computers without running a Windows operating system equivalent.

(2) STATA/IC version 13.0. The University of Minnesota participates in GradPlan pricing. You may purchase the perpetual license ($189), the one-year software license for $98, or the six month license for $69. I cannot guarantee that you will use this software in other MHA courses, but I have heard of many instances in which students have used it to do analyses for problem-solving, summer residencies, or advanced problem-solving.

The software can be ordered online and shipped directly to you. Please be sure to order it as soon as you can. We will be using it in class on 9/11. See: http://www.stata.com/order/new/edu/gradplans/campus-gradplan/ for more details.

I would suggest that you order the DVD rather than the download so that you have it available to re-install should something happen to your computer or if you purchase a new computer. Also, be sure that you get the IC version.

You do not need to purchase any additional documentation or reference material. I will provide you with full instruction to use STATA effectively. STATA is supported for Macintosh, although I believe there are some subtle differences. When ordering STATA, make sure that you have the IC version that works for Macintosh computers if you have one.

Supplemental Materials: For most weeks, you will notice some links or additional readings listed. These are for your information. You will not be held accountable for the content on any exams.
However, the links are designed to augment the material presented or provide additional background information for the topic being discussed in class.

Also, on occasion, students ask for suggestions about where they can obtain additional explanations or problems to practice. Here are a few sources: (1) Schaum Outline Series, Kazmier’s Business Statistics – 4th edition; (2) Kaplan’s MBA Fundamentals - Statistics; (3) Barron’s Business Statistics. Each can be purchased through online retailers and generally costs about $20. Alternatively, libraries usually have a large number of older versions of statistics textbooks on hand. Please consult with the instructor if you would like more specific recommendations.

Let me also suggest two online resources that you might find useful:

Annenberg Learner: This website includes several short video units to help students understand specific statistical concepts using real-world examples. http://www.learner.org/courses/againstallodds/

Khan Academy: This website includes a series of presentations covering descriptive and inferential statistics as well as probability. https://www.khanacademy.org/math/probability
### VI. Course Outline/Weekly Schedule

#### Lesson 0:
The material covered in the statistics and managerial epidemiology warm-up will most likely be a review for those of you who have taken undergraduate statistics or epidemiology courses. We will review these concepts during the first recitation and class period. You will also be using these concepts for your first assignment and will be held accountable for them on the first exam. Please note that you do not need to have the textbook in hand before reviewing these presentations.

**Topics Covered:**
- (1) Course overview
- (2) Language of statistics and describing data
- (3) Measures of location and dispersion (range, variance, standard deviation)
- (4) Introduction to managerial epidemiology

**Readings**
None

**Problems:**
None

**Data:**
None

**Supplemental materials and links:**
- MN Department of Health Statistics: [http://www.health.state.mn.us/macros/topics/stats.html](http://www.health.state.mn.us/macros/topics/stats.html)

**No assignment**

**Recitation #0:** Tuesday 9/2, 3:30-4:30pm (Introductions, Review Syllabus, Answer software questions)

Please be sure to download from the course website the following prior to our first meeting:
1. Revised syllabus

In recitation, we will cover:
1. Variables and measurement exercise
2. Populations and samples small group exercise

Revised 8/17/14
Lesson 1 (9/4): Today’s class will begin with a small-group exercise to utilize some of the concepts introduced in the online warm-up module. Be sure to have the Excel Data Analysis Add-In installed on your computer prior to class.

Topics Covered:
(1) Descriptive statistics concepts review in the context of the small group exercise focused on hospitalized patients with heart failure

Readings:
Veney 1, 2, 3 (pp. 65-72 req.; 75-101 reference); 4; 6 (pp. 186-202)
Fos & Fine, Chapter 3

Problems:
Self-study problems
Recitation problems

Data:
HFdata.xlsx (Excel spreadsheet for small group exercise)
Assignment 1 data

Supplemental materials and links:
HCUPnet query system for national data on hospital inpatient stays: http://hcupnet.ahrq.gov/
Minnesota Health Scores: http://www.mnhealthscores.org/

Assignment #1 distributed

Recitation #1 on 9/9

Lesson 2 (9/11): Today’s class will introduce you to the software package, STATA. You should plan to install this software on your computer prior to coming to class.

Topics Covered:
Orientation to STATA and its commands
Conducting descriptive statistics in STATA

Readings:
(1) STATA tutorial handout
(2) STATA small group exercise handout
### Lesson 3 (9/18)
Today’s class will introduce you to probability concepts. It is very important that you do your assigned readings prior to coming to class today, as there are a lot of topics introduced in a short period of time. This is also the most theoretical of the lessons.

#### Topics Covered:
1. Probability (sample space, outcomes, counting rules, events, unions, intersections)
2. Contingency tables (marginal probabilities, joint probabilities, conditional probability)
3. Multiplication rule and total probability rule
4. Specificity and Sensitivity
5. Positive Predictive Value, Negative Predictive Value and Bayes’ Rule

#### Readings:
Veney 5

#### Problems:
Self-study exercises and suggested answers
Recitation problems

#### Data:
Probability Examples (Excel worksheet)

#### Supplemental materials and links:
Sensitivity and Specificity Calculator: [http://faculty.vassar.edu/lowry/clin1.html](http://faculty.vassar.edu/lowry/clin1.html)
Short clip on sensitivity and specificity: [http://www.youtube.com/watch?v=ICKaSKoDPml](http://www.youtube.com/watch?v=ICKaSKoDPml)

Assignment #1 is due.

**Recitation #3 on 9/23**

**Lesson 4 (9/25):** Today’s class will build on concepts presented in the prior class. Probability distributions can be thought of as ‘models’ for how outcomes occur. They are important to understand because the methods that we will learn later in the semester make assumptions about the particular type of probability distribution that a variable or a sample statistic follows.

**Topics Covered:**
1. Probability distributions
2. Expected value and population variance
3. Binomial distribution
4. Poisson distribution
5. Exponential distribution

**Readings:**
Veney 5; Handout

**Problems:**
Self-study
Recitation (including ED waiting time exercise)

**Data:**
Probability Distributions (Excel worksheet)
Edwait.dta (STATA data set)

**Supplemental materials and links:**


**Recitation #4 on 9/30**
Lesson 5 (10/2): Today’s class will conclude our discussion of probability and probability distributions. I will introduce you to inferential statistics and spend some time explaining two very important concepts in statistics – the sampling distribution of the mean and central limit theorem.

<table>
<thead>
<tr>
<th>Topics Covered:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Normal distribution</td>
</tr>
<tr>
<td>(2) Standard Normal distribution</td>
</tr>
<tr>
<td>(3) Transition to inferential statistics</td>
</tr>
<tr>
<td>(4) Sampling</td>
</tr>
<tr>
<td>(5) Point estimators</td>
</tr>
<tr>
<td>(6) Sampling distribution of the mean and proportion</td>
</tr>
<tr>
<td>(7) Central limit theorem</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Readings:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veney 6 (pp. 202-228)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Problems:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-study</td>
</tr>
<tr>
<td>Recitation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampling distribution of the mean (Excel worksheet and data file)</td>
</tr>
</tbody>
</table>

Supplemental materials and links:

Online Tutorial/Applet: [http://wise.cgu.edu/sdmmod/](http://wise.cgu.edu/sdmmod/)

**Recitation #5 on 10/7**

Lesson 6 (10/9): Today’s class will begin with Midterm 1. You will have 75 minutes. Material includes Lessons 0 through 5 (up through Standard Normal distribution).

For the remainder of class, I will review the sampling distribution of the mean and proportion and introduce interval estimation methods.

<table>
<thead>
<tr>
<th>Topics Covered:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Confidence intervals for a single population mean (large and small sample)</td>
</tr>
<tr>
<td>(2) Confidence intervals for a single population proportion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Readings:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veney 7 (pp. 237-246)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Problems:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-study</td>
</tr>
<tr>
<td>Recitation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamilton.dta (STATA data set for in-class examples)</td>
</tr>
</tbody>
</table>

Supplemental materials and links:

The Measurement of Health Care Performance:

[http://www.entnet.org/qualityimprovement/upload/MaintHlthCarePerf.pdf](http://www.entnet.org/qualityimprovement/upload/MaintHlthCarePerf.pdf)
Recitation #6 on 10/14

**Lesson 7 (10/16):** In this class, I will introduce you to hypothesis testing. Although the terminology may seem overwhelming at first, it just takes some time and practice. I will start with more traditional ‘textbook’ applications and then move to data-based exercises.

**Topics Covered:**
1. Hypothesis Testing
2. Inferences about a single population mean
3. Inferences about a single population proportion
4. Excel and STATA applications

**Readings:**
Veney 7 (pp. 246-268); 9 (pp. 291-298)
Handout on testing a single population proportion

**Problems:**
Self-study

**Data:**
HFdata.dta (in-class examples)
Assignment #2 data

**Supplemental materials and links:**
Course feedback #1
Assignment #2 distributed

Recitation #7 on 10/21

**Lesson 8 (10/23):** This is the second lesson on hypothesis testing. During this class period, we will expand our ‘tool kit’ by covering methods we use to test differences across two populations or groups with respect to means (e.g., average expenditures), variances (variance in expenditures) and proportions (e.g., proportion with expenditures greater than $5000).

**Topics Covered:**
1. Inferences about the difference of two population means (independent and matched samples)
2. Inferences about the difference of two population variances
3. Inferences about the difference of two population proportions
4. Excel and STATA applications
### Lesson 9 (10/30)

Today we will cover two important methods. The first of these is one-way analysis of variance, which is used for evaluating whether there are statistically significant differences among three or more populations (e.g., length of stay varies by privately insured, public insurance, and uninsured).

The second method allows us to investigate whether there is an association between two discrete random variables. As one can imagine, this is used a lot in health care, given the large number of discrete outcomes that we observe (e.g., mortality, quality, disease status, gender, race, payer mix, etc).

#### Topics Covered:

1. One-way ANOVA and post-hoc testing
2. Chi-square tests for goodness of fit, 3+ proportions, and association between two qualitative variables (Odds ratios)
3. Excel and STATA applications

#### Readings:

- Veney 8, 10.

#### Problems:

- Self-study exercises and suggested answers
- Recitation problems

#### Data:

- HFdata.dta (in-class exercises)

#### Supplemental materials & links:

- Abraham et al. (2011)

#### Assignment #2 due

Assignment #3 distributed
### Recitation #9 on 11/4

**Lesson 10 (11/6):** Today’s lesson will focus on methods used to examine the relationship between two continuous random variables.

**Topics Covered:**
- (1) Scatter diagrams
- (2) Covariance and correlation coefficient
- (3) Introduction to regression analysis
- (4) Simple linear regression
- (5) Excel and STATA applications

**Readings:**

**Problems:**
Self-study
Recitation

**Data:**
- Agevisits.dta
- MN Clinic Quality and Patient Experience

**Supplemental materials and links:**
- TBD

### Recitation #10 on 11/11

**Lesson 11 (11/13):** Today’s lesson will extend our discussion of multivariate regression analysis to include applications in which an outcome depends on several explanatory variables.

**Topics Covered:**
- (1) Estimation and interpretation of multiple linear regression models
- (2) Excel and STATA applications

**Readings:**
- TBD

**Problems:**
Self-study exercises and suggested answers
Recitation

**Data:**
- LOV.dta
- Births.dta
Recitation #11 on 11/18

Lesson 12 (11/20): Today’s lesson will extend our discussion of regression analysis to include applications in which an outcome is binary.

Topics Covered:
(3) Estimation and interpretation of multiple linear regression models
(4) Excel and STATA applications

Readings:
TBD

Problems:
Self-study
Recitation

Data:
Births.dta

Supplemental materials and links:
CDC brief: [http://www.cdc.gov/nchs/data/databriefs/db35.pdf](http://www.cdc.gov/nchs/data/databriefs/db35.pdf)

Recitation #12 on 11/25 (Work Session for Teams)

11/27 Lesson 13- No Class – Enjoy Thanksgiving.

Recitation #13 on 12/2 (Work Session for Teams)

Lesson 14 (12/4): Assignment #3: Team Project Presentations

Final Exam: Tuesday 12/9, 3:30-5:30pm in Moos Tower

Revised 8/17/14
II. Evaluation and Grading

Criteria: The final grade for this course will be determined by performance on the following.

<table>
<thead>
<tr>
<th>Item</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm</td>
<td>20%</td>
</tr>
<tr>
<td>Final exam (cumulative excluding probability)</td>
<td>25%</td>
</tr>
<tr>
<td>Assignment 1 (Teams of no more than 2)</td>
<td>10%</td>
</tr>
<tr>
<td>Assignment 2 (Individual)</td>
<td>10%</td>
</tr>
<tr>
<td>Assignment 3 (Individual)</td>
<td>15%</td>
</tr>
<tr>
<td>Assignment 4 (Teams of 5 or 6)</td>
<td>15%</td>
</tr>
<tr>
<td>Participation</td>
<td>5%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Exams: The purpose of conducting exams is to test students’ *individual* mastery of statistical and epidemiology concepts covered in the lectures and readings. Students will have 75 minutes to complete the midterm and 120 minutes to complete the final exam.

Students may use one, 8.5”x 11” formula sheet as well as a calculator. Laptops, phones, or any communications devices may not be used during the exams. Statistics, by nature, is cumulative. Material for the second exam will draw on descriptive and inferential methods, excluding probability fundamentals and probability distributions (lessons 3-4).

In the case of significant illness or emergency, please notify the instructor via phone or email prior to the exam. Specific arrangements will be made on a case-by-case basis. Without possible verification of illness or emergency, I have no option but to give you a grade of zero for the exam.

In the case that you know you will be out-of-town for a given exam, the exam may be taken early. The instructor reserves the right to give an alternative version of the exam. Please contact the instructor as soon as possible to make arrangements.

Assignments: This class has four assignments.

The first assignment may be done individually or in groups of two (students can form their own teams). The second and third assignments are to be done individually. For the fourth, team-based assignment, the instructor will form the teams to ensure a balance of students with respect to health care institutional knowledge, statistics background, facility with Excel or other software packages, and work experience.

All four assignments will include an empirical analysis and write-up to address a specific health care-related question faced by a particular stakeholder. For assignment #1, the final product will include a PowerPoint slide deck of no more than 22 slides with full “narrative” in the notes section to explain each slide’s content (consider it a ‘script’ if you were giving the actual presentation).

Assignments #2 and #3 will require each student to analyze and interpret data for a specific context and draft a formal, technical memo interpreting the results. For the individual assignments, students may work together on the empirical analysis, but must interpret and produce memos that are uniquely their own. *Any evidence of plagiarism on the memo production will result in an automatic grade of 0 for the assignment.*

For assignment #4, each team will conduct an analysis and produce a PowerPoint slide deck. Additionally, team members will execute a 20 minute presentation summarizing their findings and
recommendations during the final class session. The instructor will evaluate student performance based on the oral presentation and quality of the slide content (e.g., the extent to which the analyses correctly address the question; interpretation reflects the analyses conducted) as well as evaluations provided by classmates. Additionally, peer evaluations will be used to assess each individual member's contribution toward a team's final product.

Grading Scale: An A/F letter grade will be determined based on the following:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93-100%</td>
<td>Represents outstanding achievement relative to the level necessary to meet course requirements</td>
</tr>
<tr>
<td>A-</td>
<td>90-92.99%</td>
<td>Represents achievement that is significantly above the level necessary to meet course requirements</td>
</tr>
<tr>
<td>B+</td>
<td>87-89.99%</td>
<td>Represents achievement that meets the minimum course requirements</td>
</tr>
<tr>
<td>B</td>
<td>83-86.99%</td>
<td>No credit. Signifies work was below level of achievement that represents minimum threshold to obtain credit or work was not completed and there was no agreement between instructor and student that the student would be awarded an I.</td>
</tr>
<tr>
<td>B-</td>
<td>80-82.99%</td>
<td>No credit. Signifies work was below level of achievement that represents minimum threshold to obtain credit or work was not completed and there was no agreement between instructor and student that the student would be awarded an I.</td>
</tr>
<tr>
<td>C+</td>
<td>77-79.99%</td>
<td>Represents achievement that is significantly above the level necessary to meet course requirements</td>
</tr>
<tr>
<td>C</td>
<td>73-76.99%</td>
<td>Represents achievement that is significantly above the level necessary to meet course requirements</td>
</tr>
<tr>
<td>C-</td>
<td>70-72.99%</td>
<td>Represents achievement that is significantly above the level necessary to meet course requirements</td>
</tr>
<tr>
<td>D+</td>
<td>65-69.99%</td>
<td>No credit. Signifies work was below level of achievement that represents minimum threshold to obtain credit or work was not completed and there was no agreement between instructor and student that the student would be awarded an I.</td>
</tr>
<tr>
<td>D</td>
<td>60-64.99%</td>
<td>No credit. Signifies work was below level of achievement that represents minimum threshold to obtain credit or work was not completed and there was no agreement between instructor and student that the student would be awarded an I.</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 59.99%</td>
<td>No credit. Signifies work was below level of achievement that represents minimum threshold to obtain credit or work was not completed and there was no agreement between instructor and student that the student would be awarded an I.</td>
</tr>
</tbody>
</table>

Although I do my best to calibrate the difficulty of exams and assignments, I will curve the final grade distribution at the end of the semester if there is a need to do so. I do not scale individual exams or assignments. If I choose to scale the distribution, the scaling is always in the upward direction, so students are always made better off by it. Throughout the semester as you check your progress, the best strategy is to calculate your grade based on your actual scores and use the above breakdown to assess where you are. If you have any concerns, please contact me. If you are having difficulties with the material, please do not hesitate to contact me. I will do my best to help you get back on track.

Course Evaluation
Beginning in fall 2008, the SPH started collecting student course evaluations electronically using a software system called CoursEval: www.sph.umn.edu/courseval. The system will send email notifications to students when they can access and complete their course evaluations. Students who complete their course evaluations promptly will be able to access their final grades just as soon as the faculty member renders the grade in SPTHgrades: www.sph.umn.edu/grades. All students will have access to their final grades through OneStop two weeks after the last day of the semester regardless of whether they completed their course evaluation or not. Student feedback on course content and faculty teaching skills are an important means for improving our work. Please take the time to complete a course evaluation for each of the courses for which you are registered.

Incomplete Contract A grade of incomplete "I" shall be assigned at the discretion of the instructor when, due to extraordinary circumstances (e.g., documented illness or hospitalization, death in family, etc.), the student was prevented from completing the work of the course on time. The assignment of an
“I” requires that a contract be initiated and completed by the student before the last official day of class, and signed by both the student and instructor. If an incomplete is deemed appropriate by the instructor, the student in consultation with the instructor, will specify the time and manner in which the student will complete course requirements. Extension for completion of the work will not exceed one year (or earlier if designated by the student’s college). For more information and to initiate an incomplete contract, students should go to SPHGrades at: www.sph.umn.edu/grades.

VIII. Other Course Information and Policies

Grade Option Change (if applicable)
For full-semester courses, students may change their grade option, if applicable, through the second week of the semester. Grade option change deadlines for other terms (i.e. summer and half-semester courses) can be found at onestop.umn.edu.

Course Withdrawal
Students should refer to the Refund and Drop/Add Deadlines for the particular term at onestop.umn.edu for information and deadlines for withdrawing from a course. As a courtesy, students should notify their instructor and, if applicable, advisor of their intent to withdraw.

Students wishing to withdraw from a course after the noted final deadline for a particular term must contact the School of Public Health Office of Admissions and Student Resources at sph-ssc@umn.edu for further information.

Student Conduct Code
The University seeks an environment that promotes academic achievement and integrity, that is protective of free inquiry, and that serves the educational mission of the University. Similarly, the University seeks a community that is free from violence, threats, and intimidation; that is respectful of the rights, opportunities, and welfare of students, faculty, staff, and guests of the University; and that does not threaten the physical or mental health or safety of members of the University community.

As a student at the University you are expected adhere to Board of Regents Policy: Student Conduct Code. To review the Student Conduct Code, please see: http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf.

Note that the conduct code specifically addresses disruptive classroom conduct, which means "engaging in behavior that substantially or repeatedly interrupts either the instructor's ability to teach or student learning. The classroom extends to any setting where a student is engaged in work toward academic credit or satisfaction of program-based requirements or related activities."

Use of Personal Electronic Devices in the Classroom
Using personal electronic devices in the classroom setting can hinder instruction and learning, not only for the student using the device but also for other students in the class. To this end, the University establishes the right of each faculty member to determine if and how personal electronic devices are allowed to be used in the classroom. For complete information, please reference: http://policy.umn.edu/Policies/Education/Education/STUDENTRESP.html.

Scholastic Dishonesty
You are expected to do your own academic work and cite sources as necessary. Failing to do so is scholastic dishonesty. Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis. (Student Revised 8/17/14 16
Conduct Code: [http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf](http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf) If it is determined that a student has cheated, he or she may be given an "F" or an "N" for the course, and may face additional sanctions from the University. For additional information, please see: [http://policy.umn.edu/Policies/Education/Education/INSTRUCTORRESP.html](http://policy.umn.edu/Policies/Education/Education/INSTRUCTORRESP.html).

The Office for Student Conduct and Academic Integrity has compiled a useful list of Frequently Asked Questions pertaining to scholastic dishonesty: [http://www1.umn.edu/oscai/integrity/student/index.html](http://www1.umn.edu/oscai/integrity/student/index.html). If you have additional questions, please clarify with your instructor for the course. Your instructor can respond to your specific questions regarding what would constitute scholastic dishonesty in the context of a particular class-e.g., whether collaboration on assignments is permitted, requirements and methods for citing sources, if electronic aids are permitted or prohibited during an exam.

**Makeup Work for Legitimate Absences**

Students will not be penalized for absence during the semester due to unavoidable or legitimate circumstances. Such circumstances include verified illness, participation in intercollegiate athletic events, subpoenas, jury duty, military service, bereavement, and religious observances. Such circumstances do not include voting in local, state, or national elections. For complete information, please see: [http://policy.umn.edu/Policies/Education/Education/MAKEUPWORK.html](http://policy.umn.edu/Policies/Education/Education/MAKEUPWORK.html).

**Appropriate Student Use of Class Notes and Course Materials**

Taking notes is a means of recording information but more importantly of personally absorbing and integrating the educational experience. However, broadly disseminating class notes beyond the classroom community or accepting compensation for taking and distributing classroom notes undermines instructor interests in their intellectual work product while not substantially furthering instructor and student interests in effective learning. Such actions violate shared norms and standards of the academic community. For additional information, please see: [http://policy.umn.edu/Policies/Education/Education/STUDENTRESP.html](http://policy.umn.edu/Policies/Education/Education/STUDENTRESP.html).

**Sexual Harassment**

"Sexual harassment" means unwelcome sexual advances, requests for sexual favors, and/or other verbal or physical conduct of a sexual nature. Such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile, or offensive working or academic environment in any University activity or program. Such behavior is not acceptable in the University setting. For additional information, please consult Board of Regents Policy: [http://regents.umn.edu/sites/default/files/policies/SexHarassment.pdf](http://regents.umn.edu/sites/default/files/policies/SexHarassment.pdf).

**Equity, Diversity, Equal Opportunity, and Affirmative Action**

The University will provide equal access to and opportunity in its programs and facilities, without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, sexual orientation, gender identity, or gender expression. For more information, please consult Board of Regents Policy: [http://regents.umn.edu/sites/default/files/policies/Equity_Diversity_EO_AA.pdf](http://regents.umn.edu/sites/default/files/policies/Equity_Diversity_EO_AA.pdf).

**Disability Accommodations**

The University of Minnesota is committed to providing equitable access to learning opportunities for all students. Disability Services (DS) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations.

If you have, or think you may have, a disability (e.g., mental health, attentional, learning, chronic health, sensory, or physical), please contact DS at 612-626-1333 to arrange a confidential discussion regarding equitable access and reasonable accommodations.

Revised 8/17/14
If you are registered with DS and have a current letter requesting reasonable accommodations, please contact your instructor as early in the semester as possible to discuss how the accommodations will be applied in the course.

For more information, please see the DS website, https://diversity.umn.edu/disability/.

**Mental Health and Stress Management**
As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance and may reduce your ability to participate in daily activities. University of Minnesota services are available to assist you. You can learn more about the broad range of confidential mental health services available on campus via the Student Mental Health Website: http://www.mentalhealth.umn.edu.

**Academic Freedom and Responsibility: for courses that do not involve students in research**
Academic freedom is a cornerstone of the University. Within the scope and content of the course as defined by the instructor, it includes the freedom to discuss relevant matters in the classroom. Along with this freedom comes responsibility. Students are encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth. Students are free to take reasoned exception to the views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled.*

Reports of concerns about academic freedom are taken seriously, and there are individuals and offices available for help. Contact the instructor, the Department Chair, your adviser, the associate dean of the college, or the Vice Provost for Faculty and Academic Affairs in the Office of the Provost.

*Language adapted from the American Association of University Professors "Joint Statement on Rights and Freedoms of Students".

*Template update 9/2013*