

091

**Washington State University**  
**MAJOR CURRICULAR CHANGE FORM - - COURSE**  
 (Submit original signed form and ten copies to the Registrar's Office, zip 1035.)

091

Future Effective Date: 08/16/2013     New course     Temporary course     Drop service course  
 (effective date cannot be retroactive)     There is a course fee associated with this course (see instructions)

- Variable credit \_\_\_\_\_
- Increase credit (former credit \_\_\_\_\_)
- Number (former number 504)
- Crosslisting (between WSU departments)  
(Must have both departmental signatures)
- Conjoint listing (400/500)
- Request to meet Writing in the Major [M] requirement (Must have All-University Writing Committee Approval)
- Request to meet GER in \_\_\_\_\_ (Must have GenEd Committee Approval)     Fulfills GER lab (L) requirement
- Professional course (Pharmacy & Vet Med only)     Graduate credit (professional programs only)
- Other (please list request) \_\_\_\_\_

CrmJ    522    Foundations of Quantitative Methods  
 course prefix    course no.    title

3	3	0	0	
credit	lecture hrs per week	lab hrs per week	studio hrs per week	prerequisite

Description (20 words or less) Application of foundational quantitative methods utilized in the field of Criminal Justice and Criminology.

**Instructor:** Hamilton, Zachary    Phone number: (509) 358-7961    Email: zachary.hamilton@wsu.edu  
**Contact:** Mareinin, Otwin    Phone number: (509) 335-8428    Email: otwin@wsu.edu  
**Campus Zip Code:** 4872

- Please attach rationale for your request, a current and complete syllabus, and explain how this impacts other units in Pullman and other branches (if applicable).
- Secure all required signatures and provide 10 copies to the Registrar's Office.

[Signature] 9/16/12    [Signature] 9-24-12    \_\_\_\_\_  
 Chair/date    Dean/date    General Education Com/date

[Signature] 9/16/12    \_\_\_\_\_    \_\_\_\_\_  
 Chair (if crosslisted/interdisciplinary)\*    Dean (if crosslisted/interdisciplinary)\*    Graduate Studies Com/date

\_\_\_\_\_  
 All-University Writing Com/date    Academic Affairs Com/date    Senate/date

**\*If the proposed change impacts or involves collaboration with other units, use the additional signature lines provided for each impacted unit and college.**

# FOUNDATIONS OF QUANTITATIVE METHODS

## CRMJ 522

Instructor: Zachary Hamilton, PhD  
Office: SAC 403K  
Phone: 509.358.7961  
Office Hours: By appointment only  
Email: [zachary.hamilton@wsu.edu](mailto:zachary.hamilton@wsu.edu)

### Course Description

The intent of this course is to provide students with a base of knowledge toward the further use of statistical methods in Criminal Justice. Although there will be some overlap, it is anticipated that students enter the course with some basic knowledge of experimental and quantitative methods. The structure of this course does *not* focus on the understanding of statistical formulas but instead examines the use and manipulation of data through statistical software. Students will be expected to manipulate and analyze data using SPSS, structure and create visual aids of analysis findings and become proficient academic writers of statistical findings.

### Course Objectives

1. To help students think clearly about applying research designs and quantitative methods to their areas of research interest, to prepare them for independent research.
2. To build a foundation for thinking about causal inference in quantitative observational research.
3. To further develop the skills for consuming and critiquing research.
4. To gain hands-on experience with all steps of the process of conducting quantitative research.

### Course Materials

*Required Text:* Field, A. 2009. *Discovering Statistics Using SPSS*. 3<sup>rd</sup> ed. SAGE. Thousand Oaks, CA.

### Attendance and Participation

Students are expected to attend class and read course materials. Course material is comprehensive, in the sense that new material builds upon the understanding of previous lessons learned. Some, or all, of the material discussed will be difficult to grasp. Missing classes may result in a significant lack of understanding, and create difficulty in the comprehension of future class discussions.

Attendance and participation **will not** be factored into the final grade. With the exception of exam and assignment due dates, it is not necessary to provide any written or verbal notice for missing class. Although it is strongly suggested that one attends *every* class, the responsibility of attendance and attaining course materials (assignments and class notes) falls squarely on the student. Even if a valid excuse is presented, the instructor *will not* provide notes to any student who fails to attend any particular class session.

### Assignments

Course assignments are completed each week and are designed to apply what you have learned in the previous week. Most assignments will require an analysis of data in SPSS, the creation of visual aids (tables and figures) and written interpretation of findings. It is expected that assignments will be completed in MS Word. Tables and figures can be created using MS Work, Excel or SPSS. However, all tables provided and the write-up of findings must be of "journal quality" with proper titles, ledges and axis labels. Students are

encouraged to examine journal articles with similar analyses and examples provided in the course Dropbox. Assignments are assigned on the week the course material is presented and are due at the beginning of the following week's class. If a student is unable to attend class they must make arrangements to submit their assignment early to the Instructor. Late assignments will only be allowed with valid documentation (i.e. Physician's note of illness).

### **Instructor Availability**

Regular office hours will not be provided. It has been the experience of the Instructor that making appointments tends to be the most efficient way of assisting student outside of class. Most weeks the Instructor conducts a regular (9-5) workweek. Appointments may be made anytime within this period and appointments outside of this time period are also available when deemed necessary. The best way to arrange an appointment is to send an email with suggested dates and times of availability. It is the *student's responsibility* to make the appropriate arrangements to gain outside assistance. The Instructor will not track students down if they are failing or having difficulty grasping course content. To repeat, if a student is having difficulties, it is the student's responsibility to make an appointment with the Instructor to attain the appropriate assistance.

It is not the Instructor's intention to give "C's", "D's" or "F's" and will make every attempt to assist students who require additional attention. However, one should not confuse empathy with sympathy. If an individual fails to complete any of the requirements listed, they will be graded appropriately and exceptions will not be provided.

### **Course Medium**

This course will take place in two campuses, Pullman and Spokane. The Instructor will, for the most part, lecture from the Spokane campus. AMS will be used to provide a video conference of lectures to the (other) remote campus. For those unable to attend class, or need a refresher from past lectures, AMS uploads the video recording of each course and makes them available to registered students typically within a few days after class. To view video recordings please visit the following webpage <https://ams.wsu.edu/Videostreaming/ClassList.aspx?sem=Fall&y=2012>. However, students should not rely on the availability of video recordings as an excuse for not attending course lectures. The Instructor will not make a habit of providing additional instruction or clarification of lecture recordings or materials for students that do not attend class for reasons other than an excused absence.

Course materials will include the use of Power Point slides, data sets and SPSS syntax files. Because of the size of these files, course materials will be made available via Dropbox. The DropBox program can be installed on your computer and allows the Instructor to share large files with you. It is important to note that the files are being shared with you and belong to the Instructor. When obtaining files from the Dropbox **do not** delete or save files in the Instructor's Dropbox folder. Copy, paste and save the files to your own computer prior to using them. All lecture materials will be made available prior to class and all assignment materials will be provided a week prior to their due dates. The instructor will send you an invitation to drop box that will direct you to the programs web space and allow you to set up an account. The free account offered will be all that you need to create. All other course materials will be made available via the course space on Angel.

### **Midterm Grade Submittal**

Midterm grades will be submitted for all students by 5:00 p.m. on the Wednesday of the eighth week of the semester. Midterm grades will consist of a C or F grade only. For midterm grades, C and F are defined as follows: A C midterm grade is given to any student who is making satisfactory progress. An F midterm grade is given to any student whose progress is not acceptable and who needs to discuss his/her progress with the instructor. This assessment should not be interpreted as a formal grade, but rather as an indication of

the student's progress to date. Midterm grades are advisory and do not appear on the student's permanent record, the WSU transcript.

### **Academic Dishonesty and Plagiarism Policy**

The WSU Statement on Academic Integrity (which includes plagiarism) reads:

As an institution of higher education, Washington State University is committed to principles of truth and academic honesty. All members of the University community share the responsibility for maintaining and supporting these principles. When a student enrolls in Washington State University, the student assumes an obligation to pursue academic endeavors in a manner consistent with the standards of academic integrity adopted by the University. To maintain the academic integrity of the community, the University cannot tolerate acts of academic dishonesty including any forms of cheating, plagiarism, or fabrication. Washington State University reserves the right and the power to discipline or to exclude students who engage in academic dishonesty.

Responses to cheating/ plagiarism in this course will be as follows:

1st Offense: Any assignment plagiarized will receive an "F" (0 points) and the matter referred to the Criminal Justice Director and the Office of Student Affairs. Students will not be allowed to rewrite or resubmit a plagiarized assignment.

2nd Offense: The student will receive an "F" in the course with repeat referrals.

For clarification on what constitutes plagiarism, refer to the following websites:

1. <http://owl.english.purdue.edu/owl/resource/589/1/>
2. [www.wsulibs.wsu.edu/plagarism/main.html](http://www.wsulibs.wsu.edu/plagarism/main.html)

### **Campus Safety Plan**

The WSU (Pullman) campus Safety Plan can be found at <http://safetyplan.wsu.edu>. A listing of university policies and information related to campus safety, emergency management and the health and welfare of the campus community can be found at <http://oem.wsu.edu/emergencies>.

### **Students with Disabilities**

Reasonable accommodations are available for students with a documented disability. If you have a disability and may need accommodations to fully participate in this class, please visit the Disability Resource Center (DRC). All accommodations MUST be approved through the DRC (Admin Annex Bldg, Room 205). Please stop by or call 509-335-3417 to make an appointment with a disability specialist.

If you have questions, please contact Rosie Pavlov at [pavlovr@wsu.edu](mailto:pavlovr@wsu.edu) or 335-3417. Additional information is available on the DRC website is [www.drc.wsu.edu](http://www.drc.wsu.edu).

### **Examinations**

Two examinations (a midterm and a final) will be given. Test dates are announced in the syllabus, but the instructor reserves the right to move test dates according to the progress made in class. The tests will cover textbook and lecture materials.

## Grade Distribution

Assignments (10)	30%
Midterm	35%
Final	35%

## Make-up Examination and Late Work

Both of the examinations are to be taken at their scheduled dates and times. *There will be no make-up examinations, with the exception of documented medical and/or family emergency.* If available, prior notification of said emergencies is required. Late assignments will be deducted a full letter grade for day they are late. The clock for late assignments begins at the conclusion of the lecture in which they are due.

## Course Schedule

### **Week 1**

*August*  
21<sup>th</sup>

Introduction

23<sup>rd</sup>

Experimental and Sampling Methods

### **Week 2**

28<sup>th</sup>

Introduction to SPSS

Required Reading: Field Ch 3 & 4

30<sup>th</sup>

Univariate Statistics: Central Tendency, Dispersion and Error

Required Reading: Field Ch 1 and 2

Assignment 1 due

*September*

4<sup>th</sup>

Univariate Statistics: Central Tendency, Dispersion and Error

*Continued*

6<sup>th</sup>

Checking and Cleaning: Assumptions, Outliers and Missing Data

Required Reading: Field Ch. 5

### **Week 4**

11<sup>th</sup>

Checking and Cleaning: Assumptions, Outliers and Missing Data

*Continued*

Assignment 2 due

13<sup>th</sup>

Bivariate Statistics: Continuous Data Analysis (Correlations)

Required Reading: Field Ch. 6

### **Week 5**

18<sup>th</sup>

Bivariate Statistics: Continuous Data Analysis (Correlations)

*Continued*

Assignment 3 due

20<sup>th</sup>

Bivariate Statistics: Categorical Data Analysis (Cross-Tabulations)

Required Reading: Field Ch. 18

### **Week 6**

25<sup>th</sup>

Bivariate Statistics: Categorical Data Analysis (Cross-Tabulations)

*Continued*

Assignment 4 due

27<sup>th</sup>

Bivariate Statistics: Comparing Means (t-Tests and ANOVAs)

Required Reading: Field Ch. 9 and 10

October

**Week 7**

2<sup>rd</sup> Bivariate Statistics: Comparing Means (t-Tests and ANOVAs)

*Continued*

Assignment 5 due

4<sup>th</sup> Midterm Exam Review

**Week 8**

9<sup>th</sup> **Midterm Exam**

16<sup>th</sup> OLS Regression

Required Reading: Field Ch7

Assignment 6 due

**Week 9**

23<sup>rd</sup> OLS Regression

*Continued*

25<sup>th</sup> OLS Regression

*Continued*

**Week 10**

30<sup>th</sup> Logistic Regression

Required Reading: Field Ch8

November

1<sup>st</sup> Logistic Regression

*Continued*

Assignment 7 due

**Week 10**

6<sup>th</sup> Propensity Score Matching

8<sup>th</sup> Propensity Score Matching

Assignment 8 due

**Week 11**

13<sup>th</sup> No Class - ASC

15<sup>th</sup> No Class - ASC

**Week 12**

20<sup>th</sup> No Class - Thanksgiving

22<sup>nd</sup> No Class - Thanksgiving

**Week 13**

27<sup>th</sup> Reliability, Factor Analysis and an introduction to Latent Class Analysis

Required Reading: Field Ch 17

Assignment 9 due

29<sup>th</sup> Reliability, Factor Analysis and an introduction to Latent Class Analysis

*Continued*

December

**Week 14**

4<sup>th</sup> Final Exam Review

Assignment 10 due

6<sup>th</sup> **Final Exam**

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*August*

21<sup>th</sup> Introduction

23<sup>rd</sup> Experimental and Sampling Methods

#### **Week 2**

28<sup>th</sup> Introduction to SPSS

Required Reading: Field Ch 3 & 4

30<sup>th</sup> Univariate Statistics: Central Tendency, Dispersion and Error

Required Reading: Field Ch 1 and 2

Assignment 1 due

#### **Week 3**

*September*

4<sup>th</sup> Univariate Statistics: Central Tendency, Dispersion and Error  
*Continued*

6<sup>th</sup> Checking and Cleaning: Assumptions, Outliers and Missing Data  
Required Reading: Field Ch. 5

#### **Week 4**

11<sup>th</sup> Checking and Cleaning: Assumptions, Outliers and Missing Data  
*Continued*

Assignment 2 due

13<sup>th</sup> Bivariate Statistics: Continuous Data Analysis (Correlations)

Required Reading: Field Ch. 6

#### **Week 5**

18<sup>th</sup> Bivariate Statistics: Continuous Data Analysis (Correlations)  
*Continued*

Assignment 3 due

20<sup>th</sup> Bivariate Statistics: Categorical Data Analysis (Cross-Tabulations)

Required Reading: Field Ch. 18

#### **Week 6**

25<sup>th</sup> Bivariate Statistics: Categorical Data Analysis (Cross-Tabulations)  
*Continued*

Assignment 4 due

27<sup>th</sup> Bivariate Statistics: Comparing Means (t-Tests and ANOVAs)

Required Reading: Field Ch. 9 and 10

*October*

#### **Week 7**

2<sup>nd</sup> Bivariate Statistics: Comparing Means (t-Tests and ANOVAs)  
*Continued*

Assignment 5 due

4<sup>th</sup> Midterm Exam Review

		<b>Week 8</b>
9 <sup>th</sup>	<b>Midterm Exam</b>	
16 <sup>th</sup>	OLS Regression Required Reading: Field Ch7 Assignment 6 due	
		<b>Week 9</b>
23 <sup>rd</sup>	OLS Regression <i>Continued</i>	
25 <sup>th</sup>	OLS Regression <i>Continued</i>	
		<b>Week 10</b>
30 <sup>th</sup>	Logistic Regression Required Reading: Field Ch8	
<i>November</i>		
1 <sup>st</sup>	Logistic Regression <i>Continued</i> Assignment 7 due	
		<b>Week 10</b>
6 <sup>th</sup>	Propensity Score Matching	
8 <sup>th</sup>	Propensity Score Matching Assignment 8 due	
		<b>Week 11</b>
13 <sup>th</sup>	No Class - ASC	
15 <sup>th</sup>	No Class - ASC	
		<b>Week 12</b>
20 <sup>th</sup>	No Class - Thanksgiving	
22 <sup>nd</sup>	No Class - Thanksgiving	
		<b>Week 13</b>
27 <sup>th</sup>	Reliability, Factor Analysis and an introduction to Latent Class Analysis Required Reading: Field Ch 17 Assignment 9 due	
29 <sup>th</sup>	Reliability, Factor Analysis and an introduction to Latent Class Analysis <i>Continued</i>	
<i>December</i>		
		<b>Week 14</b>
4 <sup>th</sup>	Dead Week	
6 <sup>th</sup>	Dead Week	
		<b>Week 15</b>
11 <sup>th</sup>	Final Exam Review Assignment 10 due	
13 <sup>th</sup>	<b>Final Exam</b>	

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