



STATISTICS 200: SECTIONS 1-3 ELEMENTARY STATISTICS SPRING 2005

COURSE DESCRIPTION: Welcome to Stat 200. Statistics is the art and science of using sample data to make generalizations about populations. The objective of this course is to explore basic statistical concepts and procedures for data analysis. General topics covered in this course include:

- methods for collecting and summarizing data
- methods for evaluating the accuracy of sample estimates
- techniques for making statistical inferences

What you should discover is that statistics is not just another math course. While you will be exposed to new terminology and concepts, much of the time you will use the computer to solve problems that require quantitative solutions. Basic algebra is the only prerequisites.

INSTRUCTOR:

- **Name:** Patricia M. Buchanan
- **Office:** 309 Thomas Building
- **Office Hours:** By Appointment (see availability schedule on course web site)
- **Phone:** (814)-865-6266
- **Email:** *must always* send email inside **Angel Website** under “**In Touch**”

ROOMS & TIMES

- Section 1:** M 101 Thomas (9:05 AM) & T&R 214 Boucke (9:05 AM)
- Section 2:** M 101 Thomas (9:05 AM) & T&R 214 Boucke (10:10 AM)
- Section 3:** M 101 Thomas (9:05 AM) & T&R 214 Boucke (11:15 AM)

COURSE FORMAT

- **Overview Lectures (Monday’s at 9:05 in 101 Thomas)**
 1. **PowerPoint slides** will be posted in advance – bring a copy to the lecture
 2. Presented Information will be applied in labs, quizzes, exams, and projects
- **Computer Labs (Tues & Thurs in 214 Boucke at Scheduled Times)**
 1. Complete “activities” in small groups based on lectures and readings
 2. Activities will include both data analysis and concept illustration using the statistical software package: Minitab
 3. **Be prepared to learn** - bring your textbook, calculator, and Monday notes
 4. **Lab Activity Quizzes** will be taken at the end of each lab
 5. Some labs will be reserved for completing group projects & taking exams/quizzes

GENERAL TOPICS COVERED IN STAT 200

- Overview of Statistics: Definition, Populations, and Samples
- Basics of Experimental Design
- Binomial Distributions, Normal Distributions, & Sampling Distributions
- Descriptive And Inferential Methods for:
 1. One Quantitative Variable (One, Two, and More Than Two Samples)
 2. One Categorical Variable (One, Two, and More Than Two Samples)
 3. Two Different Quantitative Variables & Two Different Categorical Variables

REQUIRED MATERIALS

1. Printed textbook, **Mind on Statistics, 2nd Edition**. by Utts and Heckard
2. Calculator (to do homework and complete lab activities).

TABLE 1: ANGEL COURSE WEB SITE

Headings on Angel Web Site →	Syllabus	Calendar	Lessons	Classes	In Touch	Tools
What you find/ How will you use	Nothing posted	All Important Dates Are Found	All Course Content (including Syllabus)	DO NOT USE to send Email	MUST USE to send Email (use pull down menu to find names) – only place instructor keeps course correspondence	Find Scores for Lab Activity Quizzes

COURSE WEB SITE (ANGEL): <https://cms.psu.edu>

In order to participate in this class, you **must** be willing to regularly use the ANGEL web site. This includes **sending all email under “In Touch”** to both the instructor and TA’s. On this **ANGEL Web Site**, you will also find:

- **Course Syllabus**
- **Solutions to assigned homework problems**
- **Weekly Agenda’s (including assigned homework)**
- **Study Guides for Exams & Quizzes** (posted at least one week in advance)
- **Power Point Slides** (bring to class on Monday)
- **Dates** for Exams and Quizzes (posted on both syllabus and course calendar)
- **Announcements** when necessary
- **Instructor and TA** information and availability
- **Solutions for exams and quizzes**
- **Lab Activities and Lab Activity Quizzes** available for review after completed
- **Data sets for Activities & Projects**

TEACHING ASSISTANTS: This class will have two teaching assistants (TA’s). The name & office hours of the TA’s are posted on the course web site. The TA’s will:

- oversee the Thursday computer labs in 214 Boucke
- handle all grade issues including UTS reports/scantron problems and calculations
- handle all issues surrounding projects & homework: submissions, grading, & returns
- be available for help during office hours

COURSE AGREEMENT: This syllabus serves as an agreement that begins on the first day of class and ends upon completion of the scheduled final. Course expectations require that you:

1. are aware of anything discussed in class and posted on the **ANGEL** website
2. send all course email inside **Angel under “In Touch”**
3. take all exams and quizzes, including the final, during the scheduled time.
4. come to the class prepared to learn (at both lecture and lab)
5. accept the limited make-up policy
6. seek appropriate help if having problems in a timely manner
7. understand that final grades will **not** be changed for purposes of maintaining financial aid and/or academic progress. (also grades will **not** be curved)
8. keep track of all your grades
9. find enough time to make the appropriate commitment to the course (many problems evolve from being overcommitted and/or poor time management)

COURSE REQUIREMENTS

Individual & Group Quizzes

- Given in the computer labs on scantrons
- **Individual Quiz** will consist of 14-16 multiple choice questions
- **Group Quiz** will be on the same set of questions and be taken with a group after the individual quiz is submitted
- Quizzes will cover topics presented in: 1) lecture, 2) lab, 3) homework, and 4) assigned readings. Study Guides will be posted in advance
- **No Make-ups given** (because one will be dropped)

Exams and Final

- **Exams (including Final):** will be multiple choice on scantrons
- **Do not** make plans to leave campus prior the scheduled final during final's week

Group Projects

- **Project 1:** complete week before Spring Break (small project)
- **Project 2:** complete last two weeks of the semester (capstone experience)
- **Need** to both follow instructions and be statistically accurate to achieve points
- **Need to be accountable for contribution to project** (other group members can refuse to put your name on a project if you don't contribute)

Homework

- A total of 9 will be given though out the semester (best 6 will count)
- **Late homework's will not be accepted** under any circumstances
- Due on Thurs at the beginning of lab (TA's will collect and return)
- Must follow directions for full credit

Lab Activity Quizzes (Automated – On-Line)

- 15 will be given throughout the semester (best 10 will count)
- **No make-ups** under any circumstances because automated & drops
- Consist of 8-12 questions based on concepts covered in lectures and activities
- Can check scores inside Angel under "Tools"

ACADEMIC INTEGRITY includes a commitment to not engage in or tolerate acts of falsification, misrepresentation or deception. Such acts of dishonesty violate the fundamental ethical principles of the Penn State community and compromise the worth of work completed by others. This course will follow the guidelines found under Academic Integrity (Section 49-20) of the University Faculty Senate Policies for Students. This information is located on the course website.

DISABILITY POLICY: It is Penn State's policy to not discriminate against qualified students with documented disabilities in its educational programs. If you have a disability-related need for modifications in the course, contact both the instructor and the Office for Disability Services (116 Boucke) at the beginning of the semester.

COURSE CONDUCT: For an effective class experience:

Take time to listen to what is said
One person speaking at a time

Leave your cell phones and pagers turned off

Each person has insights to offer

Ask questions – your question may open the door to understanding for others

Respect each person's contributions

Never forget that your education continues after this class ends

TABLE 2: IMPORTANT DATES

Course Requirement	Dates
Exams	<ul style="list-style-type: none"> • Thurs Feb 24 • Thurs April 14
Final Exam (During Final's Week)	<ul style="list-style-type: none"> • TBA on Elion (do not make plans to leave early)
Individual & Group Quizzes	<ul style="list-style-type: none"> • Thurs Jan 27 • Thurs Feb 10 • Thurs March 17 • Thurs March 31
Project 1	<ul style="list-style-type: none"> • Tues March 1 (Start) & Thurs March 3 (Submit)
Project 2 (Capstone Experience)	<ul style="list-style-type: none"> • Tues April 19 (Start) & Thurs April 28 (Submit)

TABLE 3: SUMMARY OF COURSE REQUIREMENTS

Requirement	Points/ Single Effort	Overall Points	Overall Percent
In-Class Exams (2)	90	180	19%
Final Exam (selectively comprehensive)	100	100	10%
Project (1)	50	50	5%
Project (2)	90	90	9%
Individual Quizzes (keep best 3 of 4)	60	180	19%
Group Quizzes (keep best 3 of 4)	30	90	9%
Lab Activity Quizzes (best 10 out of 15)	15	150	16%
Homework (best 6 out of 9)	20	120	13%
Total		960	100%

FINAL GRADES: Final grades will be based on 960 possible points, i.e. (960 points = 100%). It will be possible to achieve additional points on exams so that your final total could exceed 960 points. Point ranges for final grades are found in **Table 4**. Do not expect these point ranges to be adjusted (i.e. a curve) because adjustments will be made along the way if appropriate.

MAKE-UP POLICY: In general make-ups will not be given. Specifically:

- **Individual & Group Quizzes & Lab Activity Quizzes:** **no make-ups** because drops are in place and lab activity quizzes are automated
- **Exams:** If you have University-related excuse or religious conflict, you must provide appropriate documentation prior to the exam. Exam arrangements will be made at this time. If you are legitimately sick or have a family emergency, you will have to use the percent that you receive on the final as a replacement for the missed exam. **Late exams will not be given**
- You **will not** be able to negotiate missed exams and quizzes at the end of the semester
- Deferred grades will only be considered for legitimate extenuating circumstances that occur near the end of the semester.

TABLE 4: POINT RANGES FOR FINAL GRADES

Final Grade	Point Totals	Percents
A	888-960+ points	(92.5 to 100+)%
A-	859-887 points	(89.5 to 92.4)%
B+	830-858 points	(86.5 to 89.4)%
B	782-829 points	(81.5 to 86.4)%
B-	758-781 points	(79.0 to 81.4)%
C+	720-757 points	(75.0 to 78.9)%
C	658-719 points	(68.5 to 74.9)%
D	557-657 points	(58 to 68.7)%
F	<556 points	< (58)%