# University of North Texas at Dallas
## SYLLABUS

<table>
<thead>
<tr>
<th>MATH 3680-001</th>
<th>(Applied Statistics)</th>
<th>Spring 2018</th>
</tr>
</thead>
</table>

### Department of
Mathematics and Information Sciences

### School of
Liberal Arts and Sciences

### Instructor Name:
Dr. Ali Shaqlaih

### Office Location:
DAL- 2-300-C

### Office Phone:
972-338-1908

### Email Address:
ali.shaqlaih@untdallas.edu

### Office Hours:
MW: 8:00-9:50 am; or by appointment

### Classroom TIME & Location:
WM: 11:30am-12:50pm in FH240

### Course Catalog Description:
The purpose of this course is to extend your knowledge in the fundamental concepts of Probability and Applied Statistics. To this end, we will cover descriptive statistics, elements of probability, random variables, confidence intervals, hypothesis testing, regression and contingency tables.

### Prerequisites:
Concurrent enrollment in Math 1710

### Required Text:

### Access to Learning Resources:
- UNT Dallas Library:
  - phone: (972) 780-3625;
  - web: [http://www.unt.edu/unt-dallas/library.htm](http://www.unt.edu/unt-dallas/library.htm)
- UNT Dallas Bookstore:
  - phone: (972) 780-3652;
  - e-mail: 1012mgr@fheg.follett.com

### Course Goals

The goal of this course is to:
- Learn to reason, justify and communicate mathematically
- Think critically and creatively and learn to apply different system of analysis
- Build new Statistical knowledge through problem solving;

### Learning Objectives/Outcomes:
- Be able to apply statistics in applicable situations
- Demonstrate the ability to solve problems related to probability and statistics

### Course Outline
Priority will be given to understanding the material in depth rather than covering more topics. This schedule is subject to change by the instructor. Any changes to this schedule will be announced in class.

<table>
<thead>
<tr>
<th>TOPICS</th>
<th>TIMELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptive Statistics and Probability</td>
<td>Month of January</td>
</tr>
<tr>
<td>Random Variables (Continuous and Discrete)</td>
<td>Month of February</td>
</tr>
<tr>
<td>Confidence Intervals and Test of Hypotheses</td>
<td>Month of March</td>
</tr>
<tr>
<td>Inferences based on two samples, Linear regression</td>
<td>Month of April</td>
</tr>
</tbody>
</table>
Grading Matrix:

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Value</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes</td>
<td>8 quizzes at 25 points each</td>
<td>200</td>
</tr>
<tr>
<td>Hour Exams</td>
<td>2 exams at 200 points each</td>
<td>400</td>
</tr>
<tr>
<td>Portfolio</td>
<td>Project, Hw, attendance, participation</td>
<td>100</td>
</tr>
<tr>
<td>Final Exam</td>
<td>One comprehensive exam</td>
<td>300</td>
</tr>
<tr>
<td>Total:</td>
<td></td>
<td>1000</td>
</tr>
</tbody>
</table>

The following standard grading scale will be used to determine your final letter grade:

\[ 100\% \geq A \geq 90\% > B \geq 80\% > C \geq 70\% > D \geq 60\% > F \geq 0. \]

**Homework Policy:**

Homework will be into two parts, recommended part, that is for practice and the student doesn’t need to turn in and another part that is to be handed in at the beginning of the class on the due date. You should view the assigned homework problems as the minimum number of problems required to attain some level of mastery of the material. I deem it acceptable for students to work in groups as they make their preliminary efforts to explore and work through homework problems. However, after any such preliminary and cooperative efforts, I expect each student to write up his/her final homework papers individually and without outside assistance. The act of copying another student's homework, or writing a problem solution as dictated by a tutor or from a solution manual, constitutes academic misconduct. You should do all homework problems but only selected problems will be graded. Be as neat as possible on the homework and try to keep the problems in order with space between them. Late homework will NOT be accepted.

**In-class Quizzes** (in class)

- In-class quizzes will be generally during the first 15 minutes of the class. Be on time so you will get all the time for the quiz. The dates for the quizzes are pointed on the schedule below.
- There will be 11 in-class quizzes throughout the course. At the end of the semester, each student’s best 8 quizzes will be added to get a 200 possible-point total.
- There will be no make-ups for any missed in-class quizzes for any reason. Instead, at the end of the semester only the best 8 in-class quizzes will be considered. You have 3 quizzes to miss so do not ask for make ups.
- The material that will be covered in the quizzes will be announced a head of time.

**In Class Exams** (in class)

- There will be two Mid-term Exams. The date for each exam is pointed in the schedule below.
- The final exam will be comprehensive. Students must take the final exam at the prescribed time; no exceptions. Make necessary arrangements now to attend the final exam.
- The student’s grade is determined solely by his/her performance on the evaluation criteria and the grade assignments listed above.

**Email Policy:**

Use your UNTD email account to contact me. You are responsible for any information that I send out via email. Due to privacy rights, I will not discuss grades over the phone. I will only answer emails from your UNTD email.
Make-up exam policy:
Exams should be taken as scheduled in the class time. No makeup examinations will be allowed except for documented emergencies (See Student Handbook). All requests for make-up exams MUST be submitted to the instructor in writing, with the supported documents. It is imperative that you contact your instructor as soon as possible (do NOT wait until you return to class!).

General Policies:
- The first and most fundamental expectation I have for everyone in the class is to respect one another. Among other things, this means that only one person speaks at a time, no one works on anything not related to the class (no cell use, no texting, no reading, no sleeping, …) and everyone will put forth an honest effort.
- It is the student’s responsibility to stay abreast of all class announcements and changes made to this syllabus in class, whether present or not.
- Leaving and entering the class back is generally not allowed. You can leave the class if you are not returning or for real emergency case. Leaving the class should be by the permission of the instructor.
- You are expected to review all graded quizzes, homework and exam papers as soon as they are returned. All questions about the grading of quizzes, homework or exam papers must be reported within seven calendar days of the date on which the paper was returned.
- You will NOT get better than a grade of C if you miss more than 5 classes. Missing more than 5 classes may result in being dropped from the course with a WF.
- To do well in this course, attend class every meeting on time, be prepared to work for the full class time, bring all necessary materials to class, participate as much as possible, do the homework and extra problems steadily every day rather than once a week. Don’t be afraid to make mistakes or ask questions, the more you get involved, the better you’ll do!
- My door will always be open and you should feel free to e-mail me if you have questions. Don’t stress out about math! You have the abilities to do very well as long as you work hard.

Students with Disabilities (ADA Compliance):
The University of North Texas at Dallas faculty is committed to complying with the Americans with Disabilities Act (ADA). Students with documented disabilities are responsible for informing faculty of their needs for reasonable accommodations and providing written authorized documentation. For more information, you may visit the Office of Disability Accommodation/Student Development Office, Suite 115 or call at 972-780-3632.

Student Evaluation of Teaching Effectiveness Policy:
The Student Evaluation of Teaching Effectiveness (CourseEval) is a requirement for all organized classes at UNTD. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider the CourseEval to be an important part of your participation in this class.

Bad Weather Policy:
On those days that present severe weather and driving conditions, a decision may be made to close the campus. In case of inclement weather, call UNT Dallas Campuses main voicemail number (972) 780-3600 or search postings on the campus website www.unt.edu/dallas. Students are encouraged to update their Eagle Alert contact information, so they will receive this information automatically.

Attendance and Participation Policy:
The University attendance policy is in effect for this course. Class attendance and participation is expected because the class is designed as a shared learning experience and because essential information not in the textbook will be discussed in class. The dynamic and intensive nature of this course makes it impossible for students to make-up or
to receive credit for missed classes. Attendance and participation in all class meetings is essential to the integration of course material and your ability to demonstrate proficiency. Coming to class late or leaving it early is considered an absence. Students are responsible to notify the instructor if they are missing class and for what reason. Students are also responsible to make up any work covered in class. It is recommended that each student coordinate with a student colleague to obtain a copy of the class notes, if they are absent. More than 5 classes of absence may result in being dropped from the course with a WF. A student may NOT get better than a grade of C if he/she missed more than 5 classes.

Academic Integrity:
Academic integrity is a hallmark of higher education. You are expected to abide by the University’s code of Academic Integrity policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University’s policies and procedures. Refer to the Student Code of Academic Integrity at [http://www.unt.edu/unt-dallas/policies/Chapter%2007%20Student%20Affairs.%20Education.%20and.%20Funding/7.002%20Code%20of%20Academic_Integrity.pdf](http://www.unt.edu/unt-dallas/policies/Chapter%2007%20Student%20Affairs.%20Education.%20and.%20Funding/7.002%20Code%20of%20Academic_Integrity.pdf) for complete provisions of this code.

In addition, all academic work submitted for this class, including exams, papers, and written assignments should include the following statement:

On my honor, I have not given, nor received, nor witnessed any unauthorized assistance that violates the UNTD Academic Integrity Policy.

Diversity/Tolerance Policy:
Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive & inappropriate language (swearing) and remarks offensive to others of particular nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student Conduct will be referred to the Center for Student Rights and Responsibilities as the instructor deems appropriate.

Copyright Policy:
The handouts used in this course are copyrighted. By "handouts," I mean all materials generated for this course, which include but are not limited to syllabi, lecture notes, quizzes, exams, in-class materials, review sheets, projects, and problems sets. Because these materials are copyrighted, you do not have the right to copy and distribute the handouts, unless I expressly grant permission.

Classroom Etiquette:
Appropriate behavior is expected of all students taking this course.

- Arrive to class promptly and do not leave until the scheduled ending time of the class.
- If you must arrive late or leave early, please do so as discreetly as possible and take a seat near the door.
- Turn off all non-medical electronic devices such as pagers, cell phones, laptops, etc. Take off the headphones.
- Do not read newspaper or work on unrelated assignments during class.

Grade Assignment:
- The student course grade is assigned according to the evaluation criteria and grading assignment stated on this syllabus.
- The grade is completely objective and is determined solely by student performance on each of the evaluation criterion.
**Student Behavior:**
- Student behavior that interferes with an instructor’s ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNTD.
- Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Student Life Center to consider whether the student's conduct violated the Code of Student Conduct.

The university's expectations for student conduct apply to all instructional forums, including university and electronic classroom, labs, discussion groups, field trips, etc. The Code of Student Conduct can be found at [http://dallas.unt.edu/sites/default/files/page_level2/pdf/policy/7.001%20Code%20of%20Student%20Rights%20Responsibilities%20and%20Conduct.pdf](http://dallas.unt.edu/sites/default/files/page_level2/pdf/policy/7.001%20Code%20of%20Student%20Rights%20Responsibilities%20and%20Conduct.pdf)

**Important dates:**

<table>
<thead>
<tr>
<th>Quiz 1</th>
<th>Jan. 24</th>
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<tbody>
<tr>
<td>Quiz 2</td>
<td>Jan 31</td>
</tr>
<tr>
<td>Quiz 3</td>
<td>Feb. 7</td>
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<tr>
<td>Quiz 4</td>
<td>Feb. 14</td>
</tr>
<tr>
<td>First Hour Exam</td>
<td>Feb. 21</td>
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<tr>
<td>Quiz 5</td>
<td>Feb. 28</td>
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<tr>
<td>Quiz 6</td>
<td>March 7</td>
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<tr>
<td>Quiz 7</td>
<td>March 21</td>
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<tr>
<td>Quiz 8</td>
<td>March 28</td>
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<tr>
<td>Quiz 9</td>
<td>April 4</td>
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<tr>
<td>Last day to withdraw with W or WF</td>
<td>April 6</td>
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<tr>
<td>Second Hour Exam</td>
<td>April 11</td>
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<tr>
<td>Quiz 10</td>
<td>April 18</td>
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<tr>
<td>Quiz 11</td>
<td>April 25</td>
</tr>
<tr>
<td>Project Presentations</td>
<td>May 3</td>
</tr>
<tr>
<td>Final exam</td>
<td>May 9th at 11:00 am in FH 240</td>
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