



## **BUSA 497: Data Mining**

COURSE SYLLABUS: Summer 2022

### **INSTRUCTOR INFORMATION**

**Instructor:** Mohamed Komaki

**Office Location:** BA 315B

**Office Hours:** MWF 1:00PM -2:00 PM

**Office Phone:** 903.886.5692

**Office Fax:** 903.886.5693

**University Email Address:** [Mohamed.komaki@tamuc.edu](mailto:Mohamed.komaki@tamuc.edu)

**Preferred Form of Communication:** Email (The subject of email should start with BUSA 421)

**Communication Response Time:** 24 hours

### **COURSE INFORMATION**

#### ***Textbook(s) Required***

Discovering Knowledge in Data: An Introduction to Data Mining by Daniel Larose  
ISBN: 9780470908747

Data Mining for Business Analytics: Concepts, Techniques, and Applications by Shmueli, Bruce, Yahav, et. al.  
ISBN: 9781118879368

#### ***Secondary Reference Textbook(s)***

Microsoft Excel 2010 Data Analysis and Business Modeling by Wayne Winston  
ISBN: 9780735643369

The recommended books are good reference material but **not required**.

#### ***Software Required***

The latest version of Microsoft Excel 2013 or later.

#### ***Course Description***

This course is designed to introduce students to data mining techniques and fundamental quantitative models as well as how to apply them.

The course includes an introduction to the concepts, issues, tasks and techniques of data mining. Topics include data preparation, data warehouse & data marts, association

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rules, classification, clustering, evaluation and validation, scalability, spatial and sequence mining, and data mining applications.

Students will learn data mining from two perspectives: First, how to use an information technology tool (eg: Excel Solver tool) to analyze data sets. Second, determine what the analysis results mean to business organizations. The two collections of knowledge will introduce students to data mining practices and data driven decision making in business operations and process management.

At the end of this course, students will not only understand fundamental data mining techniques, but will also understand the implications of the analysis result set to the business organization.

***Student Learning Outcomes:*** Upon completion of the course, student should be able to

1. understand data mining techniques and use of these techniques to perform appropriate data analysis in deriving an optimal knowledge base in meeting business goals/strategies
2. understand and interpret the results from the data analysis and apply those results from a business perspective

## **COURSE REQUIREMENTS**

### ***Minimal Technical Skills Needed***

Using the learning management system and using Microsoft Excel and PowerPoint, Microsoft Access (in the class, the required knowledge about the package will be covered).

### ***Student Responsibilities or Tips for Success in the Course***

Students need to regularly logging into the course website and check their emails to make sure that they have the latest information about the course.

## **GRADING**

Final grades in this course will be based on the following scale:

A = 90%-100%

B = 80%-89%

C = 70%-79%

D = 60%-69%

F = 59% or Below

### ***Assessments***

The final grade is based on the following criteria.

Assignments/ Tests	Percentage
Homework & Quiz	30%
Project	30%

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Final exam	40%
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**Homework** will be posted on the course website each week and students need to submit the homework in the next week. Under NO circumstances will I accept a late assignment.

The **project** and its guidelines will be posted on the course website. The project is an individual effort and students should submit a comprehensive report including description of the situation, analysis of the problem and the detailed analysis and solution approach. The format of the report will be provided on the course website.

**Final exam** will be posted on the course website.

## **TECHNOLOGY REQUIREMENTS**

### **Browser support**

D2L is committed to performing key application testing when new browser versions are released. New and updated functionality is also tested against the latest version of supported browsers. However, due to the frequency of some browser releases, D2L cannot guarantee that each browser version will perform as expected. If you encounter any issues with any of the browser versions listed in the tables below, contact D2L Support, who will determine the best course of action for resolution. Reported issues are prioritized by supported browsers and then maintenance browsers.

Supported browsers are the latest or most recent browser versions that are tested against new versions of D2L products. Customers can report problems and receive support for issues. For an optimal experience, D2L recommends using supported browsers with D2L products.

Maintenance browsers are older browser versions that are not tested extensively against new versions of D2L products. Customers can still report problems and receive support for critical issues; however, D2L does not guarantee all issues will be addressed. A maintenance browser becomes officially unsupported after one year.

Note the following:

- Ensure that your browser has JavaScript and Cookies enabled.
- For desktop systems, you must have Adobe Flash Player 10.1 or greater.
- The Brightspace Support features are now optimized for production environments when using the Google Chrome browser, Apple Safari browser, Microsoft Edge browser, Microsoft Internet Explorer browser, and Mozilla Firefox browsers.

### **Desktop Support**

<b>Browser</b>	<b>Supported Browser Version(s)</b>	<b>Maintenance Browser Version(s)</b>
Microsoft® Edge	Latest	N/A
Microsoft® Internet	N/A	11

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<b>Browser</b>	<b>Supported Browser Version(s)</b>	<b>Maintenance Browser Version(s)</b>
Explorer®		
Mozilla® Firefox®	Latest, ESR	N/A
Google® Chrome™	Latest	N/A
Apple® Safari®	Latest	N/A

### **Tablet and Mobile Support**

<b>Device</b>	<b>Operating System</b>	<b>Browser</b>	<b>Supported Browser Version(s)</b>
Android™	Android 4.4+	Chrome	Latest
Apple	iOS®	Safari, Chrome	The current major version of iOS (the latest minor or <b>point</b> release of that major version) and the previous major version of iOS (the latest minor or <b>point</b> release of that major version). For example, as of June 7, 2017, D2L supports iOS 10.3.2 and iOS 9.3.5, but not iOS 10.2.1, 9.0.2, or any other version.  Chrome: Latest version for the iOS browser.
Windows	Windows 10	Edge, Chrome, Firefox	Latest of all browsers, and Firefox ESR.

- You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:
  - 512 MB of RAM, 1 GB or more preferred
  - Broadband connection required courses are heavily video intensive
  - Video display capable of high-color 16-bit display 1024 x 768 or higher resolution
- You must have a:
  - Sound card, which is usually integrated into your desktop or laptop computer
  - Speakers or headphones.

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- \*For courses utilizing video-conferencing tools and/or an online proctoring solution, a webcam and microphone are required.
- Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. At a minimum Java 7, update 51, is required to support the learning management system. The most current version of Java can be downloaded at: [JAVA web site http://www.java.com/en/download/manual.jsp](http://www.java.com/en/download/manual.jsp)
- Current anti-virus software must be installed and kept up to date.

Running the browser check will ensure your internet browser is supported.

Pop-ups are allowed.

JavaScript is enabled.

Cookies are enabled.

- You will need some additional free software (plug-ins) for enhanced web browsing. Ensure that you download the free versions of the following software:
  - [Adobe Reader https://get.adobe.com/reader/](https://get.adobe.com/reader/)
  - [Adobe Flash Player \(version 17 or later\) https://get.adobe.com/flashplayer/](https://get.adobe.com/flashplayer/)
  - [Adobe Shockwave Player https://get.adobe.com/shockwave/](https://get.adobe.com/shockwave/)
  - [Apple Quick Time http://www.apple.com/quicktime/download/](http://www.apple.com/quicktime/download/)
- At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office. Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.

## **ACCESS AND NAVIGATION**

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu).

**Note:** Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

## **COMMUNICATION AND SUPPORT**

### **Brightspace Support**

#### **Need Help?**

#### **Student Support**

If you have any questions or are having difficulties with the course material, please contact your Instructor.

#### **Technical Support**

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778 or click on the **Live Chat** or click on the words “[click here](#)” to submit an issue via email.



#### **System Maintenance**

Please note that on the 4th Sunday of each month there will be System Maintenance which means the system will not be available 12 pm-6 am CST.

#### **Interaction with Instructor Statement**

Your emails will be responded within 24 hours. If you have trouble with SQL programming, its recommended sending the screenshot of the error.

## **COURSE AND UNIVERSITY PROCEDURES/POLICIES**

### **Course Specific Procedures/Policies**

Late work is not accepted. If you need extension, you need to contact the instructor.

### **Syllabus Change Policy**

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

### **University Specific Procedures**

#### **Student Conduct**

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](#).

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: [Netiquette](#)

<http://www.albion.com/netiquette/corerules.html>

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## **TAMUC Attendance**

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

## **Academic Integrity**

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

[Graduate Student Academic Dishonesty 13.99.99.R0.10](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

## **ADA Statement**

### **Students with Disabilities**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

### **Office of Student Disability Resources and Services**

Texas A&M University-Commerce

Gee Library- Room 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: [studentdisabilityservices@tamuc.edu](mailto:studentdisabilityservices@tamuc.edu)

Website: [Office of Student Disability Resources and Services](#)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

### **Nondiscrimination Notice**

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or

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veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

### ***Campus Concealed Carry Statement***

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

## **COURSE OUTLINE / CALENDAR**

The course outline will be discussed in the first session of the class and will be posted on D2L. Also, each assignment will be listed with its due date.