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|  | Seminar Accounting Analytics 5320 Fall 2024  Dr. Gary G. Berg 106 Sam Wilson Hall 439-5336 E-mail: [BERGG@MAIL.ETSU.EDU](mailto:BERGG@MAIL.ETSU.EDU) Homepage: <Https://BERGG.ETSU.EDU> | Data Analytics for Accounting |

Time: 4:00 – 6:50, M

Room: SW 334

Office Hours: 3:00 - 3:45 M

T, R: I am usually in the office in the morning if you need to see me

**Other**: as arranged

**Note:**

This is a **tentative syllabus** and **subject to revision** as deemed necessary by the instructor **(exam dates and grade weightings included)**. Some items may be added, and some items may be deleted. These revisions, if necessary, will be announced in class and/or posted on my web site. Absent students bear the responsibility for determining if revisions have been made and are responsible for incorporating these revisions in the class material.

**Prerequisite:**

1. Enrolled in the Masters of Accountancy Program

**Required Text:**

1. **Data Analytics for Accounting -** Richardson, Teeter Terrell: 3e
   1. I will not be using Connect Component for Data Analytics
2. Additional handouts that may be posted during the term

**Student responsibilities:**

You are preparing for a career as an accounting professional. You need to develop, now, the habits that will benefit you in your future career as an accounting professional. These habits include:

1. Taking responsibility for your learning.

1. Come to class prepared (do assigned readings and exercises prior to class).
2. Turn assignments in on time
3. As a future accounting professional, missing deadlines for your employer/client is unacceptable and is not tolerated. This class is conducted the same way. **Late assignments will not be accepted.**
4. Ask questions if you do not understand
5. The only way to learn accounting is to keep up with the assignments; the only way to keep up is to attend class. **Do NOT get behind; "cramming" does not work in accounting.**
6. Taking responsibility for your professional development.
7. Become involved in professional organizations such as the IMA and Tennessee Society of CPA's
8. Become involved in student organizations (BETA ALPHA PS, Delta Sigma Pi).
9. Read professional journals and business publications

3. Conduct yourself in a professional manner.

**COURSE OVERVIEW**

Organizations create and collect large amounts of data (“Big Data”) from their daily operations. The ability of an organization to analyze the large amounts of data collected to identify opportunities, problems and to improve decision making is critical to an organizations success. As a future accounting professional, it is important that you

1. know how data is created, collected, stored, and accessed
2. understand and implement controls over the storage and use of the organization's data
3. know how to use this vast source of data to make better business decisions and identify potential risks

In order to help management make better decisions, it is important that you develop the necessary skill set to analyze the large amounts of data that are collected. Use of data analytics can be:

1. Descriptive
2. Diagnostic
3. Predictive
4. Prescriptive

This course will expose you to various techniques that are used to analyze the data collected. The course will also expose you to some of the common software packages currently used in organizations.

**COURSE GOAL AND OBJECTIVES:**

1. Develop a decision making framework.
2. Understand how data is collected, created, stored, and shared by technology
3. Understand the processes need to develop, report, and analyze business data.
4. Understand how managers use business analytics to formulate and solve business problems.
5. Understand and identify business risks and ethical issues related to data collection, storage, and use.

**Computer Technology**

1. This is a technology intensive class. There will be a number of assignments during the semester. Most of the assignments will require the use of one of the following applications:
   1. Excel
      1. The Excel assignments are based on using the latest version of Excel for the Windows O/S
      2. Earlier versions of Excel for windows and versions of Excel for the MAC are not as feature rich as the current version of Excel for Windows.
         1. You may need to do some of the Excel assignments in the lab.
   2. Access
      1. Access is not available for the MAC. If you use a MAC, you will need to use the lab for any Access assignment
   3. Power BI
      1. This is a data visualization tool similar to Tableau
      2. Available as a download from Microsoft (No MAC version)
      3. Available on 12 third floor library computers
   4. Tableau?????????
      1. Tableau is a data visualization tool and will be available on some lab machines.
      2. I will let you know which lab will have Tableau available.
      3. If you have your own personal computer
         1. I may be able to get a student software key that will allow you to install tableau on your personal computer.
         2. It is my understanding that the key is good for 180 days.
         3. You should back up your computer before installing Tableau
   5. SQL for data extraction
   6. Remote Desktop access to data hosted at the University of Arkansas Sam M. Walton College of Business.
      1. VMware Horizon software web portal
      2. Instruction on how to access will be provided

**ADDITIONAL Notes**

1. **Classroom basics**
   * **Attendance:** I do not take role. Keep in mind that **Students** that attend on a regular basis and stay on top of work will perform better than those that do not. **If you choose not to put forth the effort, have the decency to take responsibility for your actions**
   * **Class Arrival/departure:** If you cannot arrive to class on time, or if you need to leave early, you have an obligation to minimize classroom disruption.
   * **Cell Phones:** **Turn them off and put them away in your pocket/purse**. **There is to be no social networking, texting, etc., during class**. **Cell phone usage during class is a distraction to your colleagues that are serious about their development as a future accounting professional and will not be tolerated**. **Anyone using their cell phone during class will be asked to leave.**
2. **Resources Available/Assignments**

* Assignments will be posted on my class web site at <https://bergg.etsu.edu/index.html>
* **Power point lecture outlines** will be available **on D2L** for download. For printout purposes, select the slide handout option in PowerPoint of 2, 3 or 6 slides to a page. Set print option to pure black and white to save on toner/ink cartridges.
  + - 1. **Grading Basis** (subject to change)
  1. **Exams (number subject to change)**

Exam #1

Exam #2 ‑‑‑> 65%

Chapter 10 & 11 Project Cases

* Exams are designed to test your understanding of the material, not what you have memorized. Not all exam problems/questions will be a mirror image of homework assignments. In some cases exam problems will be similar to, but not exactly like homework assignments.
* There will be **NO** individual make-up exam. In the event of an **excused** absence from an exam, the **grade achieved on** a **comprehensive final** will be substituted. Unexcused absences will receive an exam grade of **zero. Missing exam due to work is not a valid excuse.**
* **Failure to contact me personally prior to exam will be considered an unexcused absence. Voice mail and email are not acceptable contacts.**
* **Any student athlete or student who will miss an exam for University purposes must let me know prior to the exam and provide appropriate documentation. Failure to do so will be considered an unexcused absence.**
* **Cell phones are to be put away during exams. Anyone caught with cell phone out during exam will receive an automatic zero on that exam**

1. Assignments ( ? ) 35%

**Grading Scale**

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| A >=93  A- >=90 <93 | B+ >=87 <90  B >=83 <87  B- >=80 <83 | C+ >=77 <80  C >=73 <77  F <73 |  |

1. **Assignments**
   1. Assignments will be submitted electronically
   2. **Most assignments will require submission of the analysis file(s) and corresponding analysis write-up.**
      1. Assignments will most likely be submitted using the D2L dropbox.
      2. Instructions for each assignment will contain submission requirements.
      3. **All assignments** will have a **submission deadline**(**date and time**)
      4. **Failure** to follow submission requirements and/or **missing submission deadline** will result in **a grade of 0**
      5. Sending the wrong file will result in a **grade of 0**
      6. **Submission to the wrong dropbox will result in a grade of zero**
   3. These assignments **are not** group projects. Students should work independently.
   4. **Copying/plagiarism** will result in a **grade of 0** for all parties involved.
   5. Make sure file is **Virus free**. Any file received with a virus will receive a **grade of 0**.
2. **Assignment write-ups**: Assignment write-ups will be graded on both the quality of the analysis and the quality of the write-up.
   * 1. Write-ups **must** be typed.
     2. Hand written write-ups **will not be accepted and will receive grade of 0**
3. Academic misconduct will not be tolerated. Any incident of academic misconduct will be dealt with in accordance with Departmental, College, and University Regulations.

Important dates to remember:

1. Last day to drop a class **OCT. 14**
2. Last day to withdraw **DEC. 3**

**CLASS SCHEDULE (Tentative)**

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| **WEEK** | **Date** | **Chapter** | **Topic** | **Assignments** |
| **1** | **Aug 26** |  | **Data Entry Controls**  **Data Security**  **Access Forms/Excel Forms**  **Excel data validation** | **All TBA** |
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| **2** | **Sept 9** |  | **Access Database Tables & Queries**  **SQL Intro**  **Joins, Null to Zero (NZ)**  **Query examples**  **Pivot Tables**  **Power Pivot**  **Power Query** |  |
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| **3** | **Sept. 16** | **1** | Hypothesis Testing Interpreting Regression Output  **Data Analytics in Accounting and Identifying the Questions** |  |
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| **4** | **23** | **2**  **3** | **Mastering the Data**  **Performing Test Plan & Analyzing the Results**  **Excel Modeling**  **Breakeven** |  |
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| **5** | **28** | **4** | **Communicating Results and Visualizations** |  |
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| **6** | **OCT 7** |  | **Exam 1 ????** |  |
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| **7** | **21** | **5** | **The Modern Accounting Environment**  **Seven Steps to Continuous Auditing** |  |
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| **9** | **28** | **6**  **7** | **Audit Analytics**  **Managerial Analytics** |  |
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| **10** | **Nov 4** | **7** | **Managerial Analytics** |  |
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| **11** | **Nov 11** | **8** | **Financial Statement Analytics** |  |
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| **12** | **11** | **9** | **Tax analytics** |  |
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| **13** | **25** |  | **Exam 2 ??????** |  |
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| **14** | **25** |  | **Exam 2 ??????**  **Class Project** |  |
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| **15** | **27-29** |  | **Thanksgiving Holiday** |  |
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| **16** | **Dec 9** |  | **Project Case(s) due** |  |