Marketing Analytics (MKTG 450)
Course Syllabus – Fall 2016

Radford University
College of Business and Economics
Department of Marketing

INSTRUCTOR: Dr. Angela Stanton, Professor of Marketing

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     540-633-2292 (Home)
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OFFICE HOURS: Tuesday/Thursday 9:30 – 10:30 a.m. and 1:00 – 1:30 p.m. I am also around outside of my scheduled office hours. If you need to see me and you can’t make it to my office hours, contact me and we’ll set up a time to meet (or if you’re in the neighborhood, just stop by -- if I’m in, my door is usually open).

TIME/PLACE: Section 1: Tuesday/Thursday 11:00 a.m. – 12:15 p.m. – COBE Trading Room

PREREQUISITES: MKTG 340 Principles of Marketing AND ITEC 100 or ITEC 281 (or permission of the instructor)

Students enrolling in Marketing Analytics must be able to:

- Identify and apply basic marketing concepts;
- Use basic information technology tools (e.g., spreadsheets, word processors, web browsers, e-mail readers, presentation packages, etc.);
- Demonstrate an ability and a willingness to learn and use other relevant technology tools as they pertain to course content; and
- Work effectively with other class members.

TEXT: Predictive Analytics: The Power to Predict Who Will Click, Buy, Lie or Die (2016) – ISBN 978-1119145677 – Author: Eric Siegel. This book is not available from the University bookstore but can be purchased from online booksellers such as Amazon.com. Please make sure you purchase the 2nd edition of the book published in 2016 and not the first edition (from 2013).

Other readings will be posted on the course D2L site.

You will also need to pay $75 for the Microsoft Office Specialist (MOS) exam as this is a part of this course (see information provided under Examinations in the Course Evaluation, Grading & Important Dates portion of the syllabus). You will be given access to the GMetrix software to help prepare your for the exam. I will also provide you with a variety of online resources and videos to
help prepare you for the exam. However, if you do not have a great deal of experience with Excel or want more training, you may want to consider purchasing an Excel book such as: Microsoft Excel 2016 Bible: The Comprehensive Tutorial Resource (2016) by John Walkenbach (ISBN: 978-1119067511; Publisher: Wiley) -- this particular book is a very comprehensive resource (and will cover far more than necessary to pass the specialist exam). Please note, though, that you should not need additional texts to pass the certification exam.

**COMPUTER:**

You will need a computer that runs a recent version of the Windows Operating System (Windows 7 or higher). You will also need to have Microsoft Office 2016 installed on your computer. These are now requirements for students in the Radford University BBA program and are a requirement for this course. The GMetrix training software that you will be able to use to help you prepare for the MOS certification exam only runs in a Windows environment as this is intended to simulate the types of questions presented on the exam (which is also a Windows-based exam). Additionally, the Excel for Mac does not have the same functionality as Excel for Windows. If you have a Mac and you do not wish to set it up to run Windows, you will either have to (1) use computer labs on the Radford University campus (GMetrix is only available in the COBE Trading Room), (2) borrow a laptop that meets these requirements, or (3) purchase a laptop to meet these requirements.

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**FOUNDATIONS FOR THIS COURSE**

This course supports the mission and vision of the College of Business and Economics at Radford University:

- **Mission of the College of Business and Economics:** The newly adopted mission of the COBE is to provide an active learning environment that develops analytical and innovative business professionals for the dynamic global economy.

- **Vision of the College of Business and Economics:** The newly adopted vision states "We will be recognized for challenging minds, cultivating talents, and connecting people in a technology-rich learning environment."

**WHY MARKETING ANALYTICS?**

Analytics is both an art and a science to discover and understand historical patterns in a company’s data in order to predict and improve business performance under forecasted environmental, economic, and competitive conditions.

Firms operate in an increasingly challenging business environment, with greater competition, more informed customers and rapidly changing market trends. Simultaneously, they also have access to more information about their customers, the marketplace and their competitors than ever before. There has been an exponential growth in data generated from internal and external databases, store scanners, customer transactions, web navigation, online search, and more recently, social media but most companies do not know how to best use this data. Thus, it is imperative that all marketing professionals understand the data available to them and how to most effectively make use of it. In this environment, knowing how to use this information to make optimal business decisions is a crucial competitive advantage and companies are, as a result, seeking trained professionals who have the skills to analyze the data to help managers make better marketing decisions. But the reality is: the demand for individuals grounded in Analytics far exceeds the supply of graduates. Analytics is seeing demand outpacing the supply of talent! The U.S. Bureau of Labor Statistics predicts that there will be a 24 percent increase in demand for professionals with management analysis skills over the next eight years; and McKinsey Global Institute Predicts there will be a
shortage of talent necessary for organizations to take advantage of Big Data. By 2018, the United States alone could face a shortage of 140,000 to 190,000 people with deep analytical skills as well as 1.5 million managers and analysts with the know-how to use the analysis of big data to make effective decisions.

Marketing analytics drives organizational insights; insights lead to greater understanding of customers and markets; that understanding yields innovative products, better customer targeting, improved pricing, and superior growth in both revenue and profits. That’s why today’s companies are viewing analytics and employees who can create and use them as essential for creating value.

**COURSE DESCRIPTION AND OBJECTIVES**

Marketing Analytics tools and techniques are developed and applied to real-world business decisions. Major emphasis is placed on developing an understanding of the data available to marketers, its uses and limitations, and the tools and techniques for predicting and measuring the effectiveness of a company’s marketing efforts. Analytical, critical thinking and technology skills will be enhanced throughout the course.

The course will be taught using a variety of materials and exercises including lectures for key concepts and processes, in class and out of class exercises, and applied projects to enhance student understanding and skill. Due to the technical and applied nature of the subject matter, hands-on experience with various analytical tools and software will be a key component of the course.

This course will introduce students to state-of-the-art marketing analytics and will demonstrate how to practically apply these analytics to real-world business decisions. Students will develop an understanding of the data available to marketers, its uses and limitations, and be exposed to methods for measuring performance of marketing efforts. Students will acquire hands-on experience with tools and software which may include spreadsheet-based models, marketing metrics, business intelligence and modeling software and web/social media measurement tools. In a world where marketers are held accountable for results, the mastery of marketing analytics is an indispensable competitive advantage.

This course also supports the needs and expectation of employers when hiring college graduates. Specifically this course will focus on the needs of employers in the following areas:

**Intellectual and practical skills, specifically**

- The ability to communicate effectively, orally and in writing
- Critical thinking and analytical reasoning skills
- The ability to analyze and solve complex problems
- Teamwork skills and the ability to collaborate with others in diverse group settings
- The ability to innovate and be creative
- The ability to locate, organize, and evaluate information from multiple sources
- The ability to work with numbers and understand statistics

In this course we will be operating as a partner with IBM through the IBM Academic Initiative. As such, you will have access to software and materials usually only available to members of industry. IBM SPSS Statistics, IBM SPSS Modeler and Microsoft Excel, along with discussions of web analytics software will aid in student understanding of the complex and increasing demand for individuals knowledgeable of and trained in Marketing Analytics. The course experience will be fast-paced and content-rich to reflect the dynamic nature of data analytics.

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At the conclusion of the semester, you will be able to:

- Describe the decision-making process and the role of marketing analytics as a decision support tool in an organization
- Demonstrate how to apply marketing analytics procedures to business problem solving
- Apply key marketing analytics tools and techniques
- Differentiate and employ the basic principles and methods of data mining and predictive analytics

Specific outcomes include:

- Understand the decision making process and the role of Marketing Analytics as a decision support tool in an organization;
- Understand the relationship between Marketing Analytics, CRM and customer loyalty;
- Understand how Marketing Analytics are applied in various industries and functions;
- Gain knowledge of the strengths and weaknesses of the various Marketing Analytics models and statistical applications available in the market;
- Understand the different types of data being used in Marketing Analytics and their nuances;
- Understand the information technology considerations inherent in Marketing Analytics to include database development/manipulation, data warehousing, and database querying;
- Gain hands-on experience in applying Marketing Analytics procedures to business problem solving;
- Understand why market segmentation is so important and identify segments using RFM and Cluster Analysis;
- Measure the value of segments using customer lifetime value modeling;
- Explore how to “slice and dice” the data to get different views of the information; how to aggregate and disaggregate the data to see the information with varying degrees of resolution; and how to do important types of analytics and related reports;
- Acquire hands-on experience with key Marketing Analytics tools such as Microsoft Excel, IBM SPSS Statistics, and SAS Enterprise Guide;
- Be able to create reports using various visual displays including pivot tables;
- Be able to evaluate marketing problems and determine suitable analytical methods;
- Understand the difficulties presented by massive, opportunistic data;
- Understand the basic principles of data mining; the different methods of data mining; and how they compare;
- Gain an understanding of the privacy, ethical, governmental, and legal issues in data mining and marketing analytics.

THE VALUE OF THIS COURSE

Companies are witnessing an exponential growth in customer data and find they are ill prepared to turn the data into meaningful information for marketing management decision making. This data comes from a variety of sources including email and other unstructured text; surveillance cameras; distribution and logistics; customer characteristics; marketing research; media usage; customer spending habits; competitive and business intelligence; POS scanners and market basket analyses; internet marketing including web searches and navigation; and social media. With so much raw data, organizations urgently need tools and employees who know how to use them to effectively and efficiently extract actionable information to help optimize business decisions. Analytics is both an art and a science to discover and understand historical patterns in a company’s data in order to predict and improve business performance under forecasted environmental, economic, and competitive conditions. Analytics leads to a greater understanding of customers and markets which yields innovative products and services, better customer targeting, improved pricing, and superior growth in revenues, profits, and market share. Companies today are seeking graduates fully grounded in
business principles, but who also possess the analytical skills to develop better decision models and create more accurate predictions of customers’ response to business decisions.

COURSE EVALUATION, GRADING & IMPORTANT DATES

You will be evaluated on your knowledge of marketing analytics and your ability to apply that knowledge effectively. Your performance will be evaluated by means of examinations, in and out of class assignments, quizzes and your level of engagement in the class (participation). Specifically, the weights assigned to each of these performance measures (as well as the associated dates) are:

- **Exam 1 (12%)** – Google Analytics Certification – since this a 90 minute exam, you will not be able to take this exam during class. You will be able to choose the date and time you wish to take the exam but you must take the exam before the beginning of class on October 6, 2016.
- **Exam 2 (12%)** – this is a take home exam that is due no later than the beginning of class on November 1, 2016
- **Exam 3 (12%)** – this is a take home exam that is due no later than 6 p.m. on Friday, December 9th.
- **Exam 4 (12%)** – Microsoft Office Specialist Certification – during the final exam period for the course on Thursday, December 15th (10:15 a.m. – 12:15 p.m.). I may also provide an additional time to provide some flexibility (if so, I will announce this in class).
- **Assignments/Student Engagement/Professionalism (37%)** – throughout the entire semester
- **Quizzes (15%)** – at the beginning of each class (beginning Thursday, January 28th)

The student’s final grade* will be strictly determined as follows:

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<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>93.00% +</td>
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<tr>
<td>A-</td>
<td>90.00% - 92.99%</td>
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<tr>
<td>B+</td>
<td>87.00% - 89.99%</td>
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<tr>
<td>B</td>
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<tr>
<td>B-</td>
<td>80.00% - 82.99%</td>
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<tr>
<td>C+</td>
<td>77.00% - 79.99%</td>
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<tr>
<td>C</td>
<td>73.00% - 76.99%</td>
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<tr>
<td>C-</td>
<td>70.00% - 72.99%</td>
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<tr>
<td>D+</td>
<td>67.00% - 69.99%</td>
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<tr>
<td>D</td>
<td>63.00% - 66.99%</td>
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<tr>
<td>D-</td>
<td>60.00% - 62.99%</td>
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<tr>
<td>F</td>
<td>Below 60%</td>
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Examinations. Four examinations will be given during the semester: the first three during the semester (please note the exam dates on the schedule – these dates will not change unless there are extenuating circumstances) and the fourth during the course final exam period.

- **Exam #1** will be the Google Analytics Certification exam. Employers are looking for people with this certification so this will be another way to set yourself apart from others. The Google Analytics Certification exam is taken online from Google and there is no fee for taking the exam. The exam consists of 70 multiple choice questions and you have 90 minutes to complete the exam. You can use notes to assist you in taking this exam – and it is recommended that you do so (just remember, you only have 90 minutes so you will need to really have your notes organized and indexed – obviously you will not have time to look at your notes for every question). I will provide more detail on what will be helpful to you during
the semester. Because you are allocated 90 minutes for the exam and our class meeting time is 75 minutes, you will not be able to take this exam during class. You will be able to choose the date and time for taking the exam but you must do so no later than the beginning of class on Tuesday, October 6th.

Score to Earn the Certification

You must receive a score of 80 (or higher) to pass the exam and receive the certification.

What You Must Submit

Because you will not be taking the exam during class and because I cannot access your Google account, you will have to provide me with “proof” of your exam score. When you have completed and submitted the exam, the score will appear immediately. You need to take a screen shot and paste it into a Word Document or email so that I know your score. You will also need to take a screen shot of your Google Partners (https://www.google.com/partners) My profile page. Examples of the screen shots are shown below:

If you do not provide the screen shot of the exam score provided immediately after the exam is submitted but show proof that you passed the exam, I have no other recourse than to record the minimum passing score of 80 (if you do not pass the exam and do not provide the screen shot of your score, I will have no other recourse but to record a score of 0 for the exam).
What If I Don’t Pass the Exam

If you do not pass the exam, you can retake the exam after 7 days (this is a Google rule, not mine). If you choose to retake the exam, you must provide me with the submitted proof (see What You Must Submit section above) no later than the beginning of class on Tuesday, November 29th.

Grade Recorded for Exam 1

My goal is for you to do what you need to do to earn the certification on your first attempt and to give you an incentive for doing so. Your grade recorded for exam #1 will be as follows:

- If you pass the exam on your first attempt, I will record the score earned + 10 points
- If you do not pass the exam on your first attempt and do not retake the exam, I will record the score earned
- If you do not pass the exam on your first attempt but you retake the exam, I will record the average of all exam scores earned + 7.5 points

- **Exams #2 and #3** will be based on material covered in the course. Both of these exams will be take home exams as they are focused on the application of material and are not based on rote memorization. The exam will be posted to the course D2L site at least 5 days before it is due. Take home exams meet the same honor code requirements as in-class exams. Once the exam has been posted, you are not allowed to discuss the material covered or the exam questions with your peers as this is a violation of the Radford University honor code.

- **Exam #4** will be the Microsoft Office Specialist (MOS) 2016 Excel Exam. This is the basic Excel certification (Excel Specialist). You will take this exam during class during the final exam period on December 15th. While some of you may have received certification in Excel 2013, I will still expect you to sit for the new 2016 certification as holding the latest certification will make you more desirable to employers.

Certifications are a way of setting yourself apart from others in the job market and provide third-party verification that you possess the skill. You will be provided with access to GMetrix, an online training system that was purchased by the College of Business & Economics (COBE) to assist with preparation for the exam. I will also provide you with other materials to assist you in your preparation. You will have two options for paying for the certification exam:

- **Payment by Check or Cash:** The COBE has significantly reduced the price of the certification exam for current RU students. The cost of the exam is $75 (Radford University charges a reduced rate that is less than the price of paying through Certiport or taking it at other Certiport centers). You must pay the $75 before you take the exam. You can pay the testing fee in cash (must have exact amount – no change can be provided) or by check (made out to Radford University) — at this time the COBE does not have the ability to take credit cards as payment for certification exams. Payments will be made directly to the new Center for Innovation and Analytics (located in room 231). When you pay for the exam, you will be given a receipt. Please do not lose this receipt as I cannot administer the exam without proof of payment.

- **Payment by Credit Card:** If you wish to pay by credit card (Visa, Mastercard, Discover & American Express only), you have two options:

  (a) $96 to take the exam one time [http://shop.certiport.com/product-p/12000476.htm](http://shop.certiport.com/product-p/12000476.htm), or

  (b) $115 to take the exam and one retake if you do not pass the first time
http://shop.certiport.com/product-p/12000485.htm (please note that if you pass the exam the first time, the retake is worthless as it cannot be applied to anything else – purchasing a retake is like purchasing an insurance policy for your car – it covers you if you need it; otherwise it pays you nothing). If you decide to pay via the Certiport site, you must do this no later than 2 days before the exam. Certiport emails you an exam voucher and it takes them up to 2 days to process it. I cannot allow you to take the exam without the voucher.

Accommodations for Students with Disabilities

Certiport, the administrator of the MOS exams, does have a policy for accommodating students with disability. Please note, however, that being classified as a DRO student at RU does not automatically grant you the same status with Certiport. For more information, visit http://www.certiport.com/PORTAL/desktopdefault.aspx?page=common/pagelibrary/Disabilities.htm. If you choose to apply for an exam accommodation, you must do so no later than November 15th as Certiport requires a minimum of 2 weeks to review and process the forms. You must also inform me by sending me an email that you have applied for the accommodation no later than November 15th.

Certification & Grading

You will have two options for when you can take the certification exam. You may take it: (1) on the last day of class or (2) during the final exam period. If you take the exam on the last day of class, you will have the option of being able to retake the exam during finals week (in the event you do not pass on the first try – 95% of the students I have had in this course have passed the exam on their first attempt). If you wait until the final exam period and do not pass, you will not have the opportunity to retake the exam as a part of this course (although you could certainly retake it at some other point to earn the certification).

You must receive a score of 700 (out of 1000) to pass the certification exam. Your grade for exam 4 will be:

\[
\text{Your grade} = \left( \frac{\text{score you earned on certification}}{10} \right) + 10
\]

Thus, if you scored a 700 on the certification exam, your exam #1 score will be 80.

If you do not pass the certification and choose to retake the exam, your score for exam 4 will be:

\[
\text{Your grade} = \left( \frac{\text{average of all of your exam scores}}{10} \right) + 10
\]

Thus, if you scored 550 on your first attempt and 750 on your second attempt, your exam score on Exam #2 will be 75 (((550+750)/2) / 10) + 10

Exam Retake Policies

If you do not pass the exam and wish to retake the exam, the following policies apply (please keep in mind that you must pay $75 each time you take the exam) - http://www.certiport.com/PORTAL/desktopdefault.aspx?page=common/pagelibrary/RetakePolicyMOS.html:

- If you do not pass on the first attempt, you must wait 24 hours before you can retake the exam a second time.
- If you do not pass the exam on the second attempt, you must wait 48 hours before you can retake the exam a third time.
- There is a two-day waiting period for any subsequent exam retake.
Assignments/Student Engagement/Professionalism. In order to reinforce key course concepts, each student will be involved in participating in content-related assignments and exercises. As you can see from the percentage of the course grade, these assignments are critically important to the course. Some of these may be assigned as homework; others may be in-class exercises — since this class is in a computer lab you should expect assignments during class almost every day. Some assignments will be individual while others may be done in teams of 2 or 3. On assignments where you are allowed to work in teams, I expect all team members to participate fully in each and every exercise assigned.

On individual out-of-class (homework) assignments, please note that while I have no problem with students discussing homework assignments and helping each other with problems (as this is part of the learning process as well), the work turned in must be your work. Simply copying another student’s work or re-running their analyses is unacceptable and in violation with the RU Honor Code. If I suspect that there is an honor code violation, I will assign a grade of zero (0) for that assignment and file a report with the Office of the Dean of Students. Any subsequent violations will be handled in accordance with the university honor code system.

All out-of-class assignments are due at the beginning of class on the date specified - no late assignments will be accepted for credit. While I encourage you to do any missed assignments for your own learning (and because some assignments build upon earlier assignments), you cannot make-up missed assignments for credit — this includes both homework assignments and in-class assignments/activities. Because of the nature of the course, there will be no additional or extra credit assignments to increase your grade.

I believe it is important that you provide me with accurate and timely feedback on these assignments. I will post answers to assignments to the course D2L site and I will grade all assignments turned in to me on time. I will also try to return assignments back within 2 class periods (there will of course be times when that is not possible). Oftentimes students are concerned how poor performance on one or two assignments may impact their homework grade. We all have bad days or have more trouble with certain concepts/techniques than others. Although I will not assign extra credit in this class, I will make upward adjustments (this means adding points) to the final assignments grade at the end of the semester for students who submit all of the out-of-class homework assignments (and they must be done completely – if you turn in only part of an assignment, you will not be eligible for these extra points). Only homework assignments are included in this adjustment because including in-class assignments would create an unfair situation of double jeopardy for a student who may be ill and misses class on a particular day (no credit for that day’s in-class assignment and the loss of an adjustment to the final homework grade).

Each student is expected to be an active contributor to class discussions and in-class assignments, cases, activities, etc. — this will not just be a “chalk and talk” class — your participation is vital. I will keep track of your attendance and participation throughout the semester. I also expect you to be professional in your class behavior and you can severely HURT your grade in this area by acting unprofessionally in class (see course policy on professional behavior for more details). Obviously you must be present in class in order to participate (there is definitely a correlation between attendance and participation). If you are absent, you cannot participate. Please keep in mind, however, that quantity in this area does not necessarily equate to quality. You will be evaluated on the quality of your contributions. Also, please do not assume that simply coming to class ensures you will receive a high grade in this area.

Quizzes. Keeping up with the readings and posted class materials are important in order for the material covered in class to be best understood and to allow your most active engagement in class. It is also imperative that you stay on top of what is covered during each class. Quizzes (number of questions will vary) will be given in order to help keep you up-to-date with the reading material, recorded lectures (if applicable) and what is being covered in class. There are no make-ups for missed quizzes (unless I have made an arrangement with you in ADVANCE — see Missed Quizzes policy). Quizzes will be administered at the beginning of class. Some specifics about the quizzes:
All quizzes will be administered at the beginning of class – each quiz will be timed (most quizzes will be 5 minutes but some may be a bit longer) – if you are late, you may not be able to take the quiz. In addition, if you leave class early, you will not receive credit for any quiz taken on that day.

Most quizzes will be online on D2L and will be password protected. **You must be in class in order to take and receive credit for a quiz.** You may not provide a password to any student not in class during the time of the quiz. If you provide the password to another student not attending class and they take the quiz, you will receive a 0 on the quiz -- if the person who provides the password does not come forward, I will have no other choice but to assign a grade of 0 to everyone in the class for that quiz. If you submit a quiz and are not in class, you will receive a 0 on the quiz AND you will receive a 10 point deduction on your final semester quiz grade. If this occurs more than one time, your quiz grade for the semester will be 0.

Each quiz will be worth 10 points. You cannot receive a 0 on a quiz if you attend class as I will provide points simply for taking the quiz (in the event you have a bad day and miss all of the questions).

There may be days when there are “double” quizzes – you will know this is advance.

I will drop your three lowest quiz grades.
Planned Semester Schedule*

please note that the dates for the exams will not change but topic coverage may change depending on student needs/abilities or unforeseen circumstances

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic(s) Covered During Class</th>
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<tbody>
<tr>
<td>30 Aug</td>
<td>Syllabus Review; Instructor &amp; Student Introduction; Marketing Analytics Introduction</td>
</tr>
<tr>
<td>1 Sep</td>
<td>Marketing Analytics Introduction (continued)</td>
</tr>
<tr>
<td>6 Sep – 22 Sep</td>
<td>Google Analytics</td>
</tr>
<tr>
<td>27 Sep – 4 Oct</td>
<td>Manipulating and Analyzing Data in Excel</td>
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<tr>
<td>6 Oct</td>
<td><strong>Exam #1 – Due at the beginning of class</strong></td>
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<tr>
<td>6 Oct</td>
<td>Levels of Measurement; Introduction to SPSS; Data Manipulation</td>
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<tr>
<td>11 Oct</td>
<td>Exploring Data; Frequencies; Descriptive Statistics</td>
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<tr>
<td>13 Oct</td>
<td>Crosstabulations; Independent Samples t-Test; One-Way ANOVA</td>
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<tr>
<td>18 - 20 Oct</td>
<td>Market Segmentation &amp; Cluster Analysis</td>
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<tr>
<td>25 Oct</td>
<td>Scatterplots &amp; Correlation Analysis</td>
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<tr>
<td>27 Oct – 1 Nov</td>
<td>Linear Regression</td>
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<tr>
<td>1 Nov</td>
<td><strong>Exam #2 – Due at the beginning of class</strong></td>
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<tr>
<td>8 – 10 Nov</td>
<td>Logistic Regression</td>
</tr>
<tr>
<td>15 Nov</td>
<td>Model Validation &amp; Assessment</td>
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<td>17 Nov</td>
<td>Data Visualization using Excel</td>
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<td>22 – 24 Nov</td>
<td>Thanksgiving Break – No Classes</td>
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<tr>
<td>29 Nov – 1 Dec</td>
<td>Data Visualization using Tableau</td>
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<td>6 - 8 Dec</td>
<td>Ethical Issues &amp; Privacy Considerations in Analytics</td>
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<tr>
<td>9 Dec</td>
<td><strong>Exam #3 - Due no later than 6 p.m.</strong></td>
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<tr>
<td>15 Dec</td>
<td><strong>Exam #4 – in-class during final exam period (10:15 a.m. – 12:15 p.m.)</strong></td>
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*Timing of topic coverage may be adjusted as instructor deems necessary to enhance student learning.