<u>BUAD 425 – Data Analysis for Decision Making</u> Syllabus Spring 2017

Instructor: Office: Office Hours: Email:	Prof. Vishal Gupta BRI 401 G Wed/Fri 3:00p – 5:00p or by appointment guptavis@usc.edu	
Sections:	15005 R Mon 12:00p – 1:50p JFF LL 103 *15007 R Tues 10:00a – 11:50a JFF 240	15017 R Mon 2:00p – 3:50p JFF LL 103 15008 R Tues 12:00p – 1:50p JFF LL 103
	*15013 R Thurs 10:00a – 11:50a JFF 240	15014 R Thurs 12:00p – 1:50p JFF LL 103

*Starred sections are required to bring a laptop to every class session.

Course Description

Over the last two decades, we have witnessed an explosion in the availability of data. Firms routinely collect point of sales transactions, monitor operations throughout their supply-chain, mine website traffic, and track customer engagement. Business analytics and data are transforming modern firms, and, in some cases, disrupting entire industries. Importantly, these changes are not limited to the "back-office" or operations; every aspect of the firm -- organizational structure, marketing, product design, and strategic planning – is shifting towards data-driven decision making. With this shift comes an increased need for "data-savvy" managers; managers who are not necessarily data-science experts, but understand what analytics can and cannot do, how to ask the right questions, and, most importantly, how to interpret data to make better decisions.

The goal of this course is to help you develop your skills as a data-savvy manager. To that end, we will study several basic analytics techniques, focusing on how you, yourself, can apply them in practice, interpret their output, build intuition, and leverage them in decision making. Specifically, we will focus on:

- AB Testing: How can we combine data and experimentation to incrementally improve our business model?
- KPIs and Dashboarding: How do we convert the ocean of raw data into a manageable insights for decision making? What are the right data to measure and track? How can we communicate that data most effectively to stakeholders?
- Classification: Can we utilize historical data to make useful predictions?
- Clustering: What hidden structure is in our data? What sorts of insights does that structure give us about our business?

BUAD 425 is an integrative capstone course that draws on your <u>entire</u> Marshall education: statistics, finance, marketing, operations, communications, economics and accounting. Our goal is to stress not only that data-driven decision making can be useful in all of these disciplines, but to help you think laterally across these disciplines to solve problems.

Learning Objectives

At the end of this course, you will be able to:

- I. Explain in your own words the key ideas behind fundamental techniques in data analytics, including dashboarding, classification, clustering and AB-testing
- II. Identify new opportunities to use these techniques across business domains to guide decision making
- III. Confidently apply these techniques to novel problems using a combination of Excel and JMP
- IV. Formulate and communicate actionable business recommendations based upon your analysis, including its limitations
- V. Critically assess the validity of analytics-based recommendations in the context of specific business decisions

Please see the appendix for alignment of these goals with the Marshall Learning Objectives.

Required Materials

- This class will heavily leverage both Microsoft Excel and JMP. Both pieces of software are available from USC computer labs, or for download to a personal computer from http://itservices.usc.edu/software/. Please see the BB page for important information on which versions to download, the virtual lab, and other details.
- Other readings, lecture notes and videos will be distributed throughout the course via BlackBoard.
- Students in sections 15007 R and 15013 R are required to bring a working laptop to every session with the above software installed and the ability to access the internet.
- **Important:** To access the computer lab, you must have a MyMarshall account, which is provided free of charge to all Marshall students. If you do not have a MyMarshall account, you can get one from Academic Information Services in HOH 300. Notice, your MyMarshall account is DISTINCT from your USC ID.

Prerequisites:

- BUAD 281 (or 305), BUAD 302, BUAD 304, BUAD 306, BUAD 307, BUAD 310 and BUAD 311
- BUAD 497 is co-requisite

Course Notes:

We use Blackboard for all assignments, course materials, and announcements. Please check Blackboard and your email daily. If you would like hard copies of any course materials, it will be your responsibility to print them out prior to class.

Working with software is an integral part of this course. Your quizzes and assignments (see below) require using this software. Thus, it is very important that you attend and actively participate in software exercises during class sessions.

Discussing homework assignments, pre-class preparation, and pre-case assignments with a partner or study-group is permitted and highly encouraged. Your peers are now and will always be your best resource to learn. However, each student is required to prepare, write-up, and submit her or her own solutions independently, including computer work. Collaboration of any sort on quizzes and exams is prohibited and will result in a zero on that quiz/exam and the appropriate University-level authorities to be notified. See also the Marshall Guidelines on Academic Integrity below.

Grading Details

Your course grade is based upon your performance on the quizzes, homework assignments, several preclass and pre-case assignments, a final team project, a final exam and, not least of all, class participation. These will be combined using the following weights:

Case work and Class Participation	5%
Pre-Class / Pre-Case Assignments	10%
Quizzes (Best 3 of 4)	25%
Homework	20%
Final Team Project	15%
Final Exam	25%

Marshall does not have a "curve" or hard target for the distribution of grades for individual assignments or the course as a whole. Our principle is that students should be given the grade they deserve based on class performance and should not be assigned an undeserved grade simply to fit a curve. That said, historically the average performance of students in this course is a "B/B+." The average performance this year for this section may be higher, lower, or the same.

Caveat: If you fail to meet the Excel Pre-Class Quiz Requirement or the Final Project Requirement described below, you can receive at most a C+ for a final grade.

Assignments

Class Participation / Pre-Class Assignments

A key learning outcome for this course is developing the ability to effectively explain data analysis and communicate recommendations based on this analysis. Consequently, class participation is critical. Your participation is evaluated mainly on the quality of your contribution and insights. I will make every effort to call on as many students who wish to speak up as possible to provide a fair chance for contributions.

Throughout the semester there will be short readings and videos, sometimes with a short "Preclass" assignment. These assignments are very easy *provided you have done the reading or watched the video*. These assignments should be submitted via BB prior to class.

Please note that it is impossible to contribute to the learning environment if you are unprepared. Thus, students in classes that require a laptop that do not have a laptop, students who do not have a usable MyMarshall user account in classes in the computer lab, and students that have not completed the reading will be docked participation points for each day they are unprepared.

Excel Pre-Class Quiz

This is not a course in how to use Excel. It is expected that all students have a foundational knowledge in Excel based on their previous Marshall classes (such BUAD 310) and experiences. Accordingly, there will be an Excel Pre-Class Quiz that you must complete on BB before the second week of class (see *Summary of Deliverables* below). There are some reference materials for you to "brush-up" on your Excel skills on BB.

You may take this quiz as many times as you like (auto-graded on BB), but you must score a 100% on it before the due date. If you do not score a 100%, you cannot earn more than a C+ for the course.

Late additions have 3 weeks from the date they register for the course to make arrangements with their instructor to complete this quiz.

If you have a lot of difficulty with this Excel Pre-Class quiz, or the subsequent in-class Excel Basics Quiz (below), you may want to consider dropping 425 to take DSO 401 to build your Excel skills first.

<u>Quizzes</u>

A second, key learning outcome of this course is to develop the ability to confidently apply the analytics methods taught with software. Quizzes assess that outcome through a straightforward application of data analysis techniques learned in class to new data. There are four quizzes. Only your best 3 count towards your final grade. They will all be taken in class.

All quizzes are closed book and no Internet access, but WILL involve software in the computer lab, or, for relevant sessions ONLY, on your laptop. You are allowed to use one double-sided crib sheet (8.5x11) on each quiz/exam. Crib sheets cannot be shared. <u>No make-up exams or quizzes are</u> <u>offered</u> – accordingly, all quizzes must be taken on their assigned date and in the section in which students are registered in the computer lab.

<u>Homework</u>

Homework assignments mirror the cases we explore in class and provide an opportunity for you to apply your skills to a new business problem. These assignments are a good example of the kinds of analytics work you may expect to do in your first job after Marshall.

Some questions may ask for specific numbers and calculations. To receive full credit, you must show your work. In some cases, you may wish to include a chart or graph. Please format it appropriately. Your scores depend on the quality and clarity of your submission. Finally, many questions ask you to make business recommendations based on your insights. Persuasive arguments tend to be brief. Long-winded answers often receive poorer scores.

Unlike other assignments, homeworks are due via BB 72 hours after the class they are set for in the syllabus. See the Summary of Deliverables Table below for clarity.

Cases/Labs and Pre-Case Assignments

The four cases/labs in the class integrate the material with the rest of your Marshall education. They are an important opportunity for you to draw-upon and practice all of the tools you have amassed over the past four years.

Each case will have an associated pre-case assignment. These assignments require you to think about the business context of the case. Please submit your responses to the questions via BB before

class, and come prepared to discuss the case in detail during class. Class sessions will focus on using analytics techniques to guide the decision-making process and ultimately formulating a cogent recommendation.

Final Case Project

Students will work in teams of four or five to analyze a case. This case will require you to apply a variety of data analytics you've learned throughout the semester to a complex problem in promotional pricing and formulate actionable recommendations. Your project will involve a short write-up summarizing and justifying your recommendations, a 10-15 minute presentation to the class of your findings, and providing constructive feedback on other team's presentations and analyses. Details of the case and requirements for the project, including grading expectations are available on BB.

Scores for individual student contributions to this team project are assigned by me, based on my observations of the team's working dynamics, my assessment of the team's project quality, and thoughtful consideration of the information provided through your peer evaluations.

Students who fail to sign up with a team to complete a final project by the due date (see *Summary of Deliverables* below) will be deducted a half-letter grade from their final project for each day they are late. Students who fail the final project can receive at most a C+ for the course.

<u>Final Exam</u>

The final exam will be cumulative. It will involve both written and computer portions. All quizzes/exams are closed book and no Internet access. You are allowed to use four double-sided crib sheets (8.5x11). Crib sheets cannot be shared.

The Final exam date and location will be announced shortly on BB and in class. It may differ from the date announced on the university web page.

Assignment Submission Policy

All assignments must be turned in via Blackboard prior to the due date listed in this syllabus. For preclass assignments and pre-case assignments, this is typically before the start of class. For homeworks, this is typically 72 hours after the end of class. Any assignment turned in late, even if by only a few minutes, will be heavily penalized. Please plan ahead as the internet might break down unexpectedy if you wait until the last minute. Submissions after solutions have been released will NOT be accepted.

Requesting Work be Re-graded

Not I, nor the graders, nor the TA is infallible. We all make mistakes. If you think we've made an error in grading one of your assignments, please follow the instructions on BB to request me to take a second look.

DSP Students

Any DSP students requiring extra time on quizzes/exams should introduce themselves to the instructor within the first 3 weeks of the semester with their DSP documentation and work with their instructor to make special arrangements outside of class to take quizzes. Quizzes must be taken the same week as indicated on the syllabus. It is the student's responsibility to reach out to the instructor to confirm plans for taking each quiz or exam at least 3 weeks prior to the scheduled date, with reasonable exceptions

made during the first 3 weeks of the term as well as for temporary injuries and students recently diagnosed.

DSP that have not notified their instructor in the first 3 weeks of the term may not be accommodated. Special instructions regarding the final exam will be distributed later in the semester.

Computer and Smartphone Policy

In order to emphasize learning practical, employable skills, this class involves heavy computer usage. Despite the temptations posed by computers in a classroom, I expect students to be engaged and to act like responsible adults. This means focusing on class, not doing other work or surfing the internet. In particular, when the class convenes after computer exercises to discuss results, you should cease working on the computer and join the discussion. Fiddling with the computers during discussion is disrespectful to your peers who are sharing, and generally unprofessional.

Smartphone use during class is not permitted under any circumstances. Do not take it out. Do not check it. Definitely silence it.

Students who act unprofessionally or fail to meet the Marshall standards of excellence may be asked to leave the classroom and will receive a zero for all class-work for that day.

Summary of Deliverables¹

14/11/1	Date		Date Topic Prepare for Class	Prepare for Class	Assignment		
Week	Mon	Tues	Wed	Thurs	(in class)	(Due on BB Before Class)	(Due on BB 72 hrs After Class)
1	1/9	1/10	1/11	1/12	Why Study Analytics?	Pre Class 1: Course Preparation	
2	1/16	1/17	1/18	1/19	Non-Examinable Session. Monday sess	sions attend an alternate session.	Excel Pre-Class Quiz
					Quiz 1: Excel Basics		
3	1/23	1/24	1/25	1/26	AB Testing	Pre Class 2: Trust Engineers Pre-Class	
						Pre-Class 3: Pivot Tables Exercise	
4	1/30	1/31	2/1	2/2	Winning an Election	Pre-Case 1: Winning an Election	
5	2/6	2/7	2/8	2/9	KPIs, Metrics and Dashboards	Pre-Case 2: Applichem Extension	
6	2/13	2/14	2/15	2/16	Dashboarding at Applichem	Pre Class 4: Vlookup Exercise	HW 1: Metrics, Dashboarding
7	2/20	2/21	2/22	2/23	Non-Examinable Session. Monday sessions attend an alternate session.		
					Quiz 2: KPIs, Metrics, Dashboarding & AB Testing	8	
8	2/27	2/28	3/1	3/2	Introduction to Classification	Pre-Class 5: Sign-up for Final Teams	
9	3/6	3/7	3/8	3/9	Logistic Regression and Decision Trees	Pre-Class 6: Classification	
	Spring Break						
10	3/20	3/21	3/22	3/23	Trojan Horse Style	Pre-Case 3: Trojan Horse	HW 2: Classification
11	3/27	3/28	3/29	3/30	Introduction to Clustering		
		Quiz 3: Classification					
12	4/3	4/4	4/5	4/6	K-Means and Hierarchical Clustering	Pre-Class 7: Clustering	
13	4/10	4/11	4/12	4/13	Chow Hound Market Segmentation	Pre-Case 4: Chow Hound	HW 3: Clustering
14	4/17	4/18	4/19	4/20	Final Presentations	Final Team Project Report & Slides	
					Quiz 4: Clustering		
					Final Presentations		
15	4/24	4/25	4/26	4/27	Course Wrap-up		

¹ See "Course Outline" below for readings, videos and podcasts for each session. Additional short readings/videos may be assigned via BB throughout the semester.

Course Outline

Module I: A/B Testing

<u>Session 1</u>: Why study analytics?

We introduce the structure of the class and define business analytics. At the end of this class you will be able to

- Recognize opportunity to apply data analytics in real-world situations
- Describe how this course connects to your previous courses at Marshall
- Explain the value of analytics and your skills to a potential employer

Readings before class:

- Course Syllabus
- McKinsey Global Institute Report on Big Data Executive Summary
 - pg. 2 from "Digital data is now everywhere..." through pg. 7 "The Use of Big Data Will Underpin New Waves of Productivity..."
 - pg. 10 from "There will be a Shortage of Talent..." through pg. 11 "Several Issues Will Have to be Addressed..."

Prepare for Class:

• Pre-Class #1: Course Preparation

Session 2: Non-Examinable Material

This session covers non-examinable material that may differ between sessions depending on the instructor. Monday classes should arrange to attend a different session of 425 by emailing the instructor of that session and asking permission. If you cannot attend any session this week, please contact your instructor.

Assignment (Due 72 hrs after Class):

• Excel Pre-Test (on BB)

Session 3: A/B Testing

We introduce AB testing and experimentation as a means to incrementally improve a business model. At the end of this session you will be able to

- Define AB testing and confounding variables in your own words
- Recognize business opportunities to leverage AB testing
- Use Excel to perform AB tests, and assess for confounding variables
- Critique test design and analyses

We will also take Quiz 1 (Excel Basics) in-class.

Readings:

- Podcast: "The Trust Engineers"
- TED Talk: "Social Experiments to Fight Poverty" by Esther Duflo
- Visualization: Bias in the Berkley Admissions Process

Prepare for Class:

• Pre Class #2: Trust Engineers

Session 4: Winning an Election Case (Lab)

We use ideas from AB-testing to design and interpret an experiment around creating the most persuasive email campaign to persuade voters to support a particular political candidate. At the end of this session you will be able to:

- Design a simple AB test to assess the effectiveness of an intervention, complete with sample size calculations
- Analyze the results of an AB test in excel and formulate appropriate business recommendations

Readings:

• Video: Introduction to Pivot Tables (on BB)

Prepare for Class:

- Pre Case 1: Winning an Election
- Pre Class 3: Pivot Tables Exercise

Module II: KPIs, Metrics and Dashboards

Session 5: KPIs, Metrics and Dashboards

How do we translate raw data into actionable insights? At the end of this session, you will be able to:

- Define a KPI in your own words
- Evaluate the data-requirements of a KPI
- Assess the appropriateness of a KPI for a particular business task
- Construct your own KPIs
- Describe how dashboards are used in management
- Evaluate the quality of a dashboard for a particular business task

Readings:

- Measuring What Matters: How to Pick a Good Metric
 - First 2 pages up to "Qualitative versus Quantitative Metrics"
- What is a Good Performance Metric?
- "Know the difference between your data and your metrics"

Prepare for Class:

• Pre-Case 2: Applichem Extension

Session 6: Dashboarding at Applichem

We will use Excel to create, compute and track KPIs for the Applichem case, and, ultimately, design a dashboard. At the end of this session, you will be able to

- Use Pivot Tables in Excel to compute KPIs and create a dashboard
- Interpret KPIs with respect to the underlying operational issues of a business

Readings:

- Vlookup Video
- (Optional) A Guide to Creating Dashboards People Love to Use. (long-ish)

Prepare for Class:

• Pre-Class 4: Vlookup Exercise

Asssignment (72 hrs after Class)

• HW 1: A/B Testing, Metrics and Dashboarding

Session 7: Non-Examinable Material

This session covers non-examinable material that may differ between sessions depending on the instructor. Monday classes should arrange to attend a different session of 425 by emailing the instructor of that session and asking permission. If you cannot attend any session this week, please contact your instructor.

Module III: Classification

Session 8: Introduction to Classification

We introduce the basic idea of classification and measures of accuracy. At the end of this session you will be able to

- Explain the idea of classification in your own words
- Recognize opportunities to use classification in business contexts
- Compute various measures of accuracy of a classifier with Excel
- Judge the business value of a potential classifier

We will also take Quiz 2 (A/B Testing, KPIs, Metrics and Dashboarding) in class.

Readings:

• "How Target Figured out a Teenage Girl was Pregnant Before Her Father Did"

Prepare for Class:

• Sign-up for Final Project Teams on BB

<u>Session 9:</u> Logistic Regression and Decision Trees At the end of this session you will be able to

- Explain the mathematical foundation of logistic regression and decision trees
- Use JMP to fit a linear classifier using logistic regression and decision tree classifier
- Assess the quality of fit for both classifiers and interpret the fitted models

Readings:

- "Introduction to Machine Learning" Visualization
 - Focus on the portions regarding the decision tree
- Video: Predicting Supreme Court Decisions with Decision Trees

Prepare for Class:

• Pre-Class 6: Classification

Session 10: Trojan Horse Style Lab

We use logistic regression and decision trees to create a personalized marketing campaign for a Men's Fashion retailer. At the end of this session, you will be able to

- Create and tune logistic-regression and decision-tree classifiers in JMP and Excel
- Interpret the accuracy of a classifier in terms of revenues and costs for a firm
- Formulate and argue for a particular business recommendation based on your analysis
- Critique the analysis of peers

Prepare for Class:

• Pre-Case: Trojan Horse Style

Assignment (Due 72 hrs after Class):

• HW 2: Classification

Module IV: Clustering

Session 11: Introduction to Clustering

We introduce the basic ideas behind clustering and describe its business applications. At the end of this session you will be able to

- Explain the intuition behind clustering and prototypical members in your own words
- Recognize opportunities to use clustering in business applications
- Describe the challenges behind defining similarity and choosing the number of clusters

Readings:

• Video: "Recommendations worth a Million"

Session 12: K-Means and Hierarchical Clustering

Quiz 3: Classification (in class)

We apply k-means and hierarchical clustering to cluster movies into genres and provide personalized recommendations similar to Netflix. At the end of this session you will be able to

- Explain the mathematical foundation of K-means and hierarchical Clustering
- Use JMP to apply both clustering algorithms
- Assess the quality of fit for both algorithms

We will also take Quiz 3 (Classification) in class.

Prepare for class:

• Pre-Class 7: Clustering

Session 13: Chow Hound Market Segmentation Case

We apply our previous techniques to segment the customer base of an online restaurant delivery service. At the end of this session you will be able to

• Interpret the results of clustering in a business context

- Formulate and argue for a particular business recommendation based on your clustering analysis
- Critique the clustering analysis of peers

Prepare for Class:

• Pre-Case: Chow Hound Market Segmentation

Assignment (Due 72 hours after Class)

• HW 3: Clustering

Session 14: Final Project Presentations

Groups will present their work and recommendations for the final case project "Targeted Promotions at Artsy."

Prepare for Class:

- 3-5 page final project report (one per team)
- Copy of your slides/visual aids from your presentation

Session 15: Course Debrief

Remaining groups will present their work and recommendations for the final case project. We will take Quiz 4 (Clustering), and we will wrap-up the course.

Appendix: Statement on Academic Conduct and Support Systems

Support Systems

A number of USC's schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the *American Language Institute* http://dornsife.usc.edu/ali, which sponsors courses and workshops specifically for international graduate students. *The Office of Disability Services and Programs* http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information* http://emergency.usc.edu will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.

Academic Integrity and Conduct

Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Section 11, Behavior Violating University Standards https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, <u>http://policy.usc.edu/scientific-misconduct</u>

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the *Office of Equity and Diversity* http://equity.usc.edu or to the *Department of Public Safety* http://capsnet.usc.edu/department/department-public-safety/online-forms/contact-us. This is important for the safety of the whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person. *The Center for Women and Men* http://www.usc.edu/student-affairs/cwm/ provides 24/7 confidential support, and the sexual assault resource center webpage http://sarc.usc.edu describes reporting options and other resources.

Appendix: Undergraduate Program Learning Goals

			Corresponding Course Learning
Goal	Description	Emphasis	Outcomes
	Our graduates will understand types of markets and key business areas and their interaction to effectively manage different types of enterprises. Specifically, students will:	High	
1	 1.1 Demonstrate foundational knowledge of core business disciplines, including business analytics and business economics 1.2 Understand the interrelationships between functional areas of business so as to develop a 	High	I - IV
	general perspective on business management	High	II, IV
	1.3 Apply theories, models, and frameworks to analyze relevant markets (e.g. product, capital, commodity, factor and labor markets)	High	III, IV
	1.4 Show the ability to utilize technologies (e.g., spreadsheets, databases, software) relevant to contemporary business practices	High	111
	Our graduates will demonstrate critical thinking skills so as to become future-oriented decision makers, problem solvers and innovators. Specifically, students will:	High	
3	3.2 Critically analyze concepts, theories and processes by stating them in their own words, understanding key components, identifying assumptions, indicating how they are similar to and different from others and translating them to the real world	High	I, IV, V
	3.3 Be effective at gathering, storing, and using qualitative and quantitative data and at using analytical tools and frameworks to understand and solve business problems	High	III, IV

	 3.4 Demonstrate the ability to anticipate, identify and solve business problems. They will be able to identify and assess central problems, identify and evaluate potential solutions, and translate a chosen solution to an implementation plan that considers contingencies 3.5 Students will demonstrate the ability to be accurate, clear, expansive (thorough, detailed) and 	High	IV, V
	fair-minded in their thinking	High	IV, V
5	Our graduates will demonstrate ethical reasoning skills, understand social, civic, and professional responsibilities and aspire to add value to society. Specifically, students will: 5.2 Recognize ethical challenges in business situations and assess appropriate courses of action	Moderate	IV
6	Our graduates will be effective communicators to facilitate information flow in organizational, social, and intercultural contexts. Specifically, students will 6.3 Demonstrate an ability to gather and disseminate information and communicate it clearly, logically, and		
	persuasively in professional contexts.	High	I, IV, V

Goals not explicitly covered in this course:

2	Our graduates will develop a global business perspective. They will understand how local, regional, and international markets, and economic, social and cultural issues impact business decisions so as to anticipate new opportunities in any marketplace.
4	Our graduates will develop people and leadership skills to promote their effectiveness as business managers and leaders.