

New Course Request

Indiana University

Indianapolis Campus

Check Appropriate Boxes: Undergraduate credit Graduate credit Professional credit

1. School/Division Business 2. Academic Subject Code BUS

3. Course Number M506 (must be cleared with University Enrollment Services) 4. Instructor Kim Saxton

5. Course Title Marketing Engineering

Recommended Abbreviation (Optional) _____
(Limited to 32 Characters including spaces)

6. First time this course is to be offered (Semester/Year): Spring 2010

7. Credit Hours: Fixed at 1.5 or Variable from _____ to _____

8. Is this course to be graded S-F (only)? Yes _____ No X

9. Is variable title approval being requested? Yes _____ No X

10. Course description (not to exceed 50 words) for Bulletin publication: This course deals with the concepts, methods, and applications fo decision modeling to address marketing issues such as segmentation, positioning, forecasting, new product design and development, advertising, sales forece and promotion planning, and pricing. This course will provide skills to translate conceptual understanding into specific operational plans.

11. Lecture Contact Hours: Fixed at 1.5 or Variable from _____ to _____

12. Non-Lecture Contact Hours: Fixed at _____ or Variable from _____ to _____

13. Estimated enrollment: 40 of which 100 percent are expected to be graduate students.

14. Frequency of scheduling: 2 x yearly Will this course be required for majors? no


15. Justification for new course: The overwhelming positive student feedback received from the experimental course taught in Spring 09 suggested this course be added as a permanent course

16. Are the necessary reading materials currently available in the appropriate library? yes

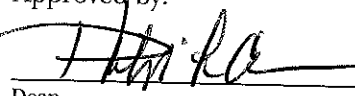
17. Please append a complete outline of the proposed course, and indicate instructor (if known), textbooks, and other materials.

18. If this course overlaps with existing courses, please explain with which courses it overlaps and whether this overlap is necessary, desirable, or unimportant.

19. A copy of every new course proposal must be submitted to departments, schools, or divisions in which there may be overlap of the new course with existing courses or areas of strong concern, with instructions that they send comments directly to the originating Curriculum Committee. Please append a list of departments, schools, or divisions thus consulted.

Submitted by: 
Department Chairman/Division Director

Date 7/21/09

Approved by: 
Dean

Date 7/27/09

Date _____
Dean of Graduate School (when required)

Date _____
Chancellor/Vice-President

Date _____
University Enrollment Services

After School/Division approval, forward the last copy (without attachments) to University Enrollment Services for initial processing, and the remaining four copies and attachments to the Campus Chancellor or Vice-President.

M506 Marketing Engineering Syllabus

Class Times & Location: Online
Office Hours: Mon/Thurs 4-5:45pm & by appt.

Dr. M. Kim Saxton
Office: BS 4041
Phone: 274-0167
E-mail: mksaxton@iu.edu

Class Materials:

Text:

Lilien, Rangaswamy & DeBruyn (2007) Principles of Marketing Engineering ISBN: 1-4251-1314-1. This text be purchased from the bookstore & amazon.com but is best purchased online from Hoover Books for ~ \$30. Be careful to make sure you get the Principles of Marketing Engineering text and not the Marketing Engineering 2nd ed, revised in 2004. Here is the link to Hoover Books.

http://www.hooverbooks.com/store/index.php?main_page=product_info&products_id=1

Software: In addition to the text, you also need to purchase a license to the Marketing Engineering for Excel software. You need to go to <http://www.mktgeng.com/student/store> to download the software. It is your choice whether you purchase a 6-month license for \$35 or a \$50 license for 12 months. We will not cover all of the analytic techniques in the text and software. But, you may choose to experiment with some of the techniques outside of class. In order to download the software, you need the following password (it is case sensitive): MEXL1357

The software is 42 mgb to download because it includes all of the cases and Excel spreadsheets for each case. With a good connection, it should take less than 10 minutes to download. You should download the software as soon as possible. Once you've downloaded the software, you should go to the My Marketing Engineering folder and print out the pdfs for all of the cases: Allegro, Bookbinders or ABB Electric (Customer Choice), ConneCtor PDA 2001 (Segmentation) and Blackberry Pearl (Positioning). The software itself is an add-in to Excel. For working through the cases, you will need to open the Excel spreadsheet included with each case. Then, the Marketing Engineering software is located under the "Add-ins" tab and is called "ME>XL". For the Allegro case, you need to install an additional add-in. The way to do this is different from what is stated in the case (new directions for Excel 2007). You need to click on the Office button in the upper left-hand corner – on this page, click on "Excel Options" at the bottom right corner. In "Excel Options" go to the "Add-ins" on the left-hand navigation. Under "Inactive Applications Add-Ins", find the "Solver Add-in" and install it. You also need to install the Analysis Toolpak [here](#).

Article: In addition to the text and software, you need to download 1 article from the University Library databases. This article can be found in Business Source Premier at the following address:

<http://web.ebscohost.com.proxy.ulib.iupui.edu/ehost/pdf?vid=11&hid=112&sid=31d1927a-dd1a-4531-bd44-fe221836b5f2%40sessionmgr109>

Davenport, Thomas H. (2006), "Competing on Analytics" Harvard Business Review, Jan. 84:1, p. 98-107.

Technical Notes: A technical note for each technique we cover has been uploaded into the course. You will want to skim these. They contain all of the math behind each technique as well as some guiding principles about how the technique works. Some are harder to follow than others. Use your judgment whether to just read these electronically or print them out.

Tutorials: For the more specifics on how the software works, each ME>XL add-in to Excel also has technique tutorials. You might consider printing these pdfs and reviewing them. You might not need this detail for the cases because of the way these datasets are set up. But, if you want to experiment with the technique, you will most likely need this detail. Throughout this course, you may need technical support. If so, please go to the textbook/software's website at: <http://www.mktgeng.com/student/index.cfm> for help.

Students will be responsible for **all** material in the *textbook, technical notes, additional readings, slide decks, cases and class discussion* whether discussed in class or not.

Course Objectives:

Marketing Engineering deals with the concepts, methods, and applications of decision modeling to address marketing issues such as segmentation, positioning, forecasting, new product design and development, advertising, sales force and promotion planning, and pricing. Unlike most marketing courses that focus on conceptual material, this course will provide skills to translate conceptual understanding into specific operational plans--a skill in increasing demand in organizations today. Specifically, the course objectives are to:

- Help you understand how analytical techniques and computer models can enhance decision-making by converting data and information to insights and decisions.
- Help you learn to view marketing phenomena and processes in ways that are amenable to decision modeling.
- Expose you to a number of examples of the successful use of marketing engineering.
- Provide you with a software tool kit that will enable you to apply marketing engineering to real marketing decision problems.

The pedagogic philosophy in this course is based on the principle of learning by doing. Each concept that we cover has a software implementation and a problem or case whose resolution can be enhanced through the use of software. To effectively leverage learning by doing, you will work with someone else to develop your case solutions. In addition, we will use 2 different discussion tools to work through the group learnings: Breeze online discussions and discussion forums. The online discussion forums will allow for asynchronous discussion of the topic. Online discussion forums will be used for the simpler topics in weeks 1 and 2. Breeze online discussions are synchronous (meaning, we will all be interacting at the same time) and will be used for discussing learnings from segmentation and positioning in weeks 3, 4 and 5.

Grading: 800 Total Points

Team Cases - 400

Online Discussions/Discussion Forums – 200

Exam – 200

Grading scale:

92-100% = A

88-89 = B+

80-81% = B-

90-91% = A-

82-87% = B

70-79% = C

There will be no rounding up of percentages (91.8 is an A-)

Your basic approach to this course should be:

1. Read the materials for the week – textbook chapter, lecture materials, technical notes, technique tutorial, etc.
2. Read the case
3. Experiment with the ME>XL software to work through the case
4. Confer with your teammate about what you figured out – see what ideas you both found, assess what different findings you each had
5. Jointly prepare your case analysis
6. Upload your case answer by the deadline
7. Participate in the online discussion/discussion forum about the case

Team Case Assignments. Some of the cases are more straightforward than others. At the same time, there are often multiple ways to interpret data. So, you will submit your case solutions with a teammate. The purpose of the team assignment is for each of you to work through the analysis on your own and then compare notes to develop your best solution. *It would not be a good idea to divide up the team assignments and each do two.* Teams of 2 will be assigned on the first day of class. If you have a preference for working with someone, please let me know.

There are 4 team cases to be worked through:

Week 1 – Allegro, simple response models – 25 points

Week 2 – ABB Electric or Bookbinders (choose one or do both for extra credit) – 75 points

Week 3 & 4 – Conglomerate's PDA ConneCtor – 100 points

Week 4 & 5 – Blackberry Pearl – 100 points

Each case assignment will consist of the "Exercises" on the last page of the case. Some ideas about each case are included after the Schedule. You should include your names & the case name in the header or footer of your written document. You are welcome to use as many pages as you need. But, do try to be both thorough and succinct. You should copy relevant portions of your Excel spreadsheets or charts into your written document rather than turn in 2 files – a written document and an Excel spreadsheet. Please single-space all written assignments with font no smaller than 10 point. I am more interested in your analysis of the spreadsheets than if you can run the software right. You should feel free to ask me any questions you have about your cases as you go. You should not feel like you need to do these cases in a vacuum. These cases are not meant to be a test – the learning process is more important than hitting "the right answer" perfectly on your own.

Online Discussions and Discussion Forums. A discussion forum will be opened at the start of the week of each case. Please feel free to post questions, ideas and learnings in these discussion forums. The purpose of these forums is to help advance the group's learning. Once the case solutions are uploaded, we will then discuss the case in this discussion forum for the first 2 cases. For the more complex cases on segmentation and positioning, we will hold a synchronous online discussion via IU's Breeze software. In the first week of class, I will survey you to find the best time (day & hours) for these discussions. I will set up the Breeze meeting and send you information about how to join. You can earn up to 50 points for each case's discussion. These points can be earned both before and after the case assignment is uploaded.

In addition, I will hold online office hours via Breeze throughout the course. More specifics on the times and how to access me will be provided the first week of class.

Exam. The Exam will be based on the materials covered throughout the semester. It will be integrative and a thinking type exam rather than a memory recall type. It will be administered through OnCourse during Week #6. You will have to go into OnCourse and complete the Exam. You will have a total of 3

hours to complete the Exam. The exam will be mostly multiple choice with a few short answers. OnCourse has been known to occasionally be finicky when students are completing an Exam (ala "Murphy's Law"). Do not panic. I will work with any students that encounter an OnCourse challenge to make sure they are treated fairly.

IU Student Honor Code will be practiced, as will all other IU SOB rules and regulations. *All contributions should be original—that means no text should be copied from the internet or another source without quotation marks and a citation. Similarly, individual assignments should be completely constructed independently in terms of format and writing, though you are welcomed and encouraged to discuss case content and ideas with fellow classmates and group members. It is assumed that you will neither give nor receive help during the exam.*

The schedule and procedures for grading in this course are subject to change in the event of extenuating circumstances. Any changes to this syllabus, due dates, course requirements, or grading criteria will be announced as far in advance as possible. Please be aware of the last days to withdraw from this course without penalty.

Communication with the Professor:

OnCourse will be used heavily throughout this course, including additional readings, case assignments, other assignments, schedule changes, etc. Please check OnCourse on a regular basis. In addition, I will check email at least once a day and attempt to respond to all inquiries within 24 hours – *feel free to email me anytime at mksaxton@iu.edu*. If you email me and do not get a response from me within 24 hours, I most probably did not receive your email. As a general policy, I try to respond to emails within 24 hours. Finally, please feel free to leave messages on my voicemail as I also check that at least once a day. I am very happy to meet in person any time to address your questions or concerns.

Tentative Schedule for M506, Marketing Engineering

DATE	TOPIC	READINGS - 12e page numbers are in ()	Case Assignments
Class #1 Jan. 19	Intro and Understanding Response Modeling	<u>Lilien et al</u> – Ch. 1 Response Modeling Technical Notes.pdf Excel Solver Technical Notes.pdf	Case: <u>Allegro Smart Sheet</u> Upload team solution by midnight, Sun. Jan. 25 Participate in online discussion time TBD
Class #2 Jan. 26	Customer Value	<u>Lilien et al</u> – Ch. 2 & p. 72-76 Choice Models Technical Notes.pdf	Case: <u>BookBinders</u> or <u>ABB Electric</u> Upload team solution by midnight, Sun. Feb 1 Participate in online discussion time TBD
Class #3 Feb. 2	Segmentation	<u>Lilien et al</u> – Ch. 3 Optional: Segmentation Technical Notes.pdf	Case: <u>Conglomerate's ConneCtor PDA</u>
Class #4 Feb. 9	Segmentation/ Positioning	<u>Lilien et al</u> – Ch. 3 <u>Lilien et al</u> – Ch. 4 Optional: Positioning Technical Notes.pdf Note that you should work on Segmentation for the 1 st half of this week & Positioning in the 2 nd half	Case: <u>Conglomerate's ConneCtor PDA</u> Upload team solution by midnight, Wed. Feb. 11 Participate in online discussion time TBD Case: <u>Blackberry Pearl</u>
Class #5 Feb. 16	Positioning	<u>Lilien et al</u> – Ch. 4 Optional: Positioning technical Notes.pdf	Case: <u>Blackberry Pearl</u> Upload team solution by midnight, Sat. Feb. 21 Participate in online discussion time TBD
Class #6 Feb. 23	Final Exam	<u>HBR Article</u> : Davenport, "Competing on Analytics"	Complete Final Exam by Sun. March 1 st at midnight

Tentative Schedule for M5xx, Marketing Engineering

DATE	TOPIC	READINGS - 12e page numbers are in ()	Case Assignments
Class #1 Jan. 19	Intro and Understanding Response Modeling	<u>Lilien et al</u> – Ch. 1 Response Modeling Technical Notes.pdf Excel Solver Technical Notes.pdf	Case: <u>Allegro Smart Sheet</u> Upload team solution by midnight, Sun. Jan. 25 Participate in online discussion time TBD
Class #2 Jan. 26	Customer Value	<u>Lilien et al</u> – Ch. 2 & p. 72-76 Choice Models Technical Notes.pdf	Case: <u>BookBinders</u> or <u>ABB Electric</u> Upload team solution by midnight, Sun. Feb 1 Participate in online discussion time TBD
Class #3 Feb. 2	Segmentation	<u>Lilien et al</u> – Ch. 3 Optional: Segmentation Technical Notes.pdf	Case: <u>Conglomerate's ConneCtor PDA</u>
Class #4 Feb. 9	Segmentation/ Positioning	<u>Lilien et al</u> – Ch. 3 <u>Lilien et al</u> – Ch. 4 Optional: Positioning Technical Notes.pdf Note that you should work on Segmentation for the 1 st half of this week & Positioning in the 2 nd half	Case: <u>Conglomerate's ConneCtor PDA</u> Upload team solution by midnight, Wed. Feb. 11 Participate in online discussion time TBD Case: <u>Blackberry Pearl</u>
Class #5 Feb. 16	Positioning	<u>Lilien et al</u> – Ch. 4 Optional: Positioning technical Notes.pdf	Case: <u>Blackberry Pearl</u> Upload team solution by midnight, Sat. Feb. 21 Participate in online discussion time TBD
Class #6 Feb. 23	Final Exam	<u>HBR Article</u> : Davenport, "Competing on Analytics"	Complete Final Exam by Sun. March 1 st at midnight

This Section out the Syllabus outlines each week's case with some additional ideas to consider as you work through the case.

Week 1 – Allegro Smart Sheet

The purpose of this week's case is to get familiar with the ME>XL software and to see how response models work as compared to typical spreadsheet based forecasting. Some of the exercises may at first seem simple and a bit silly. I encourage you to experiment with them a bit to assess what's really going on. Change all of the parameters that can be changed. What happens if you double the inputs? Halve them? Increase them by 10-fold, etc.? How does the spreadsheet really work? What's wrong with it?

When you move to the Smart Sheet, what's different? The actual response curves are black-boxed inside the software. Read the Excel Solver Technical Notes.pdf to understand what's happening in this "Black box". In reality, marketers would develop the black box too. So, the exercise of modeling responses would not be as simple as this exercise suggests. Note that the Allegro case has instructions for adding in the Solver macro for previous versions of Excel. If you have Excel 2007, the instructions are a bit different. You have to go up to the Office toolbar and click on Excel Options – then Add-ins – then check Solver under Inactive Applications. To unprotect the sheet, the instructions are different as well – go to the Review tab and Unprotect the sheet there. When you want to run Solver, it is on the Data tab, all the way at the right under "Analysis"

Scroll down on the Smart Sheet – there is a section called "Managerial Judgmental Inputs". Change the parameters – what do you think the typical response functions would be? Review your intro marketing textbook to see what researchers have typically found. Again, how does changing these inputs change the results. You can run the Solver add-in multiple times, with different inputs to see how the model changes.

Now, consider if your firm has different goals – profit maximization vs. market share maximization. How do the solutions change? Finally, think about your company. How many assumptions would you have to make to run these models? What kind of data do you have that addresses response functions to marketing inputs? How would you go about estimating these response functions if you didn't have hard data? How many assumptions would you be comfortable making and still feel like you had a "smart" model?

Week 2 – Bookbinders or ABB Electric

The purpose of this week's cases is to try and understand customer choice modeling in more detail. We frequently talk about what customers' value. Clearly, value has a broad set of objective and subjective components. Typically, when we talk about what customers value we try to understand what attributes are important to them. One of the problems marketers frequently encounter is that asking people what they value/what's important to them is a difficult task. People often don't know what's important to them or they are uncomfortable/unwilling to say what's important to them for fear of how they'll be perceived. One solution is to ask them via a survey and then use statistical models to derive importance. These statistical models are typically based on some type of regression where we create an equation that weights each attribute. Regression equations can be created for a variety of outputs: continuous data like sales volume, dichotomous data like bought/did not buy or even categorical data like which brand was bought. You should skim the Choice Models Technical Notes.pdf to get the big picture of how logit (buy/not buy) models work. There is a lot of math in this technical note – you will not be responsible for the math. But, you will be responsible for the big ideas like how to use logit models for targeting, etc.

There are 2 cases associated with choice modeling. You only have to do 1 of them:

- Bookbinders Book Club – a direct marketing company that has a database of previous promotions to datamine. You only need to turn Exercises #1, #2 & #4 for this case. You are welcome to think through the other Exercises, especially #3. But, you are only responsible for #1, 2, & 4. For the RFM model, refer to p. 72-76 in the text. You will have to build a scoring mechanism for the RFM model. For the binary logit model, refer to p. 37-40 in the text and use the Customer Choice (logit) part of the ME>XL add-in. This analysis creates a new workbook with 3 tabs – Diagnosis, Segment 1 & Estimation. The coefficients for each of the input variables is on the Segment 1 tab. Which variables are the biggest predictors of purchase? How do you interpret the negative coefficients? The Diagnosis tab tells you averages for the sample on all variables + how good a job of predicting the model did. The Estimation tab tells you what was predicted vs. observed for each case. The regression model is similar to the logit model, but assumes your data is continuous like sales volume. In order to run regression in Excel, you have to install the Analysis Toolpak, the same way you installed the Solver add-in, via the Excel Options on the Office Button. Once you've installed the Toolpak, Regression can be found on the Data tab, all the way on the right under "Analysis". You will use a series of x-values (inputs in the model) to predict the y (purchased Art History of Florence). In the regression output, I recommend resetting the "p-value" column format from "scientific" to "number". Any p-values <.05 means the variable is a significant predictor of buying. Moreover, the bigger the coefficient, the more important that variable is as a predictor. Think carefully about any coefficients with negative signs.

There are 2 datasets with this case – one for creating the model and a second (holdout) for assessing how well the model works. Generally, models can be fairly dependent on the data from which they are derived. So, it is common practice to build a model with part of the sample and then "test" it in the rest of the sample. Some researchers also run monte carlo simulations to assess how frequently the model derives a similar outcome.

- ABB Electric – an industrial components manufacturer that has survey attribute data and brand choice. For this case, you only need to turn in #1, 2, 3, & 5 (i.e. not #4). With this data, ABB Electric can both understand what attributes drive choice and segment "customers". For this case, it would be good to review p. 72-76 regarding targeting. I have also uploaded a video about ABB Electric that you might want to watch. The picture quality is not real high and the purpose would be to get a feel for this company. Probably 5-6 minutes would be enough to get this "feel". You need Real Player to play the video clip though. Now, you will run multinomial logit through the Customer Choice (logit) ME>XL add-in. By selecting each case has multiple rows (the default already set up in the spreadsheet), the software knows it is doing multinomial logit rather than binary logit. This analysis creates a new workbook with 3 tabs – Diagnosis, Segment 1 & Estimation. The coefficients for each of the input variables is on the Segment 1 tab. Which variables are the biggest predictors of purchase? The Diagnosis tab tells you averages for the sample on all variables + how good a job of predicting the model did. The Estimation tab tells you what was predicted vs. observed for each case. The key to Exercise #2 is for you to score customers as Loyal, Competitive, Switchable or Lost. Note that you only have marketing funds to target 20% of the 88 customers. Who should ABB Electric go after? Why?

You need to pick one of these 2 cases to work through. They use similar modeling but in a slightly different way with slightly different decisions. However, both suggest that choice modeling can help marketers decide which customers to target and how to allocate resources to them. If you want extra credit, you are welcome to complete both cases.

Week 3/4 – Conglomerate's ConneCtor PDA Segmentation

The analysis this week gets a bit more difficult. In this case, Conglomerate & Netlink are considering launching a hybrid PDA that integrates a smart cell phone. Although the PDA market has been developing for over 15 years, the total market is still somewhat limited and specialized. Manufacturers launching new products must balance portability with functionality. This trade-off requires selecting the right target segment from launch. To figure out how the market is segmented and who to target, Conglomerate/Netlink commissioned a survey with 2 parts – a needs part to serve as the basis of segmentation and a demographic part for profiling segments. The ConneCtor PDA (Segmentation) spreadsheet is set up to simplify your decision making as the basic options have already been programmed in.

The first challenge of segmenting is figuring out what to segment the market on, that is, the basis of segmentation. Traditionally, there are 4 possible segmentation bases: Geographic, Demographic, Behavioral or Psychographic. Research has shown that Behavioral or Psychographic segmentation tend to lead to better outcomes – bigger payoffs for less \$ invested. But, they are complex and require additional survey data to do. Look at questions 1-15 in the survey. Are these psychographics or behavioral measures, or a mix of the two? If all the measures that you are segmenting on are not on the same scale, you will need to make sure that you standardize the data first. If they are all on the same scale, you can use the raw data.

The second challenge of segmentation is figuring out how many segments (or clusters) there are. The software will generate as many segments as you tell it to create. You have to use your judgment to decide how many segments fit the data and can be implemented. Most managers struggle to cope with more than 4 or 5 segments. So, the most commonly used number is 4 or 5. But, I have personally seen companies implement against as many as 8 segments at once. In Exercise #1, you need to figure out how many segments make sense in this data. Look at the dendrogram first. As the data goes from 1 to 9 segments, how do the distance scores on the left change? Are there clusters where the change in distance is quite small, say from .34 to .25 vs. quite large like from 1.11 to .34? Now, look at the cluster info on the Segmentation sheet – are the segments that contain <10% of the sample? Are there segments that are bigger than 50%? Going back and forth between the dendrogram and N, what happens when you put together close segments from the dendrogram? Once you figure out how many segments you think there are, re-run the segmentation for that # of clusters, rather than 9.

In order to name the segments, look at the input measures carefully – which are the highest ratings by segment and across measures, which segments give the highest ratings? You can highlight the higher rated cells. Now, use your qualitative insight to assess what these segments want. What measures are not very different across the segments? What measures are very different across the segments?

Once you name the segments in Exercise #2, re-run the segmentation again adding discrimination & keeping all other parameters from your previous work constant. The discriminating variables will now tell you who these people are. What jobs do they have? What magazines do they read? Can we use this information to find them with our messages? Think about which segment ConneCtor should target – which spend the most, which are most interested in what our PDA can do?

Exercises #4-6 ask you to step back and assess what was done. What was good? What could be better? What does ConneCtor need to do next? Look at how accurate the discrimination analysis was at predicting segment membership? Is this good enough to make decisions from? Are there any measures you could think of that they missed that might enhance prediction?

Week 4/5 – Blackberry Pearl Positioning

The key to positioning is to try to visualize the market. You need to think about a 3-D image that customers hold in their heads. Positioning analysis is our attempt to represent this 3-D image, across all individual customers. But, we have a hard time envisioning 3-D images. So, we squash the picture down to 2 dimensions.

So, perceptual maps show the following information:

1. The distances between products indicate similarities in the minds of customers: the shorter the distance, the more similarly products are perceived
2. A vector on the map (shown by a line with an arrow) indicates both magnitude and direction, usually to denote product attributes
3. The map axes, a special set of vectors, suggest the broad underlying dimensions that best characterize how customers differentiate among alternative brands

As you get ready to create the perceptual maps, think about Blackberry Pearl's marketing goals and need for information. What decisions do they hope to make with this data? Before launching into the perceptual map, you should interpret the segment data in Exhibit 4 – what would you call each segment? Which segment is likely to already be Blackberry users? You'll want to know how these segments show up on the perceptual maps (segment membership is the preference data for the maps) and how closely they align with the new Blackberry Pearl. There are 2 datasets with this case. You want to do most of your analysis with the first: Blackberry Pearl (Positioning).xls. The second file Blackberry Pearl Data (Positioning).xls has been unprotected so you can filter data or copy subsets of the data – do not use this one for your primary analysis.

Your first step in this case is to use the ME>XL software to build a perceptual map to represent the 100 consumers' evaluations of 6 smart phones on 22 attributes. Start by running the 3-D map. Now, go to the Diagnostics tab – how much variance does each dimension explain – remember that 1.0 means you've explained 100% of the variance in the data. What's the improvement of moving from 2 dimensions to 3 in terms of variance explained? Now, look at the maps – there are 3 of them. There is a lot of information on these maps. You need to spend some time figuring out what they capture/recover from the original data and what gets lost. For example, do the vectors fully cover all 3 preference segments? Does one dimension dominate the others (look at the %s with the dimensions). If you think that the 2-D map explains enough variance, re-run the maps checking 2-D instead of 3-D. Now, compare the maps from each run. Is data missing from the 2-D map that was shown in the 3-D maps? To simplify the maps, either turn off or try to ignore the pink lines which show individuals. To change the data shown on the map, hit Shift-Ctrl-Left Click and display options will be shown. If you choose Ideal Point instead of Vector when you run the analysis, individual preference lines will be reduced to points. But, the resulting map will be more squashed together since vectors are not trying to be explained. Now, look at the Diagnostics – which attributes explain the most/the least variance? Are there any attributes that seem lost on the map? Finally, consider the attributes that most closely align with each dimension and interpret what the underlying dimensions on the map are.

Once you've picked the number of dimensions and interpreted the map(s), now look at where the segments show up. Are there segments that seem to align with the Blackberry Pearl? Are there segments where the Pearl does not seem to fit? As you think about Exercise #4, you might try to write a positioning statement that follows the form: "For (target users), Blackberry Pearl is the smart phone that (points of difference or unique benefits) because (reasons to believe)". Use the segments you are targeting and the attributes that align with the Pearl to craft this statement. Consider what marketing programs in terms of Price, Place and Promotions need to be done to support this product with the target users. How successful do you think the Blackberry Pearl will be based on this data? Now, consider that at the time of this case, the iPhone was not considered in the data. But, the iPhone was launched shortly after the Pearl. What effect do you think the iPhone would have on the Pearl?

Finally, step back and consider what the positioning data and software told RIM Blackberry managers. What could they have done differently? What could have been improved? What are the weaknesses of this approach?
