

**COURSE TITLE/NUMBER, NUMBER OF CREDIT HOURS:**

**ISM 4403  
Section 001  
Advanced Business Intelligence  
3 credit hours**

**COURSE LOGISTICS:**

<b>Term:</b>	<b>Spring 2012</b>
<b>Class Location:</b>	<b>FL 411</b>
<b>Time:</b>	<b>Monday 4:00 – 6:50</b>

**INSTRUCTOR CONTACT INFORMATION:**

<b>Instructor:</b>	<b>Robert P. Cerveny, Ph. D.</b>
<b>Office Address:</b>	<b>FLH 213</b>
<b>Office Hours:</b>	<b>Monday 2:30 – 3:30 pm Wednesday 2:30 – 3:30 pm and by appointment</b>
<b>Phone:</b>	<b>(561) 297-4008</b>
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<b>E-mail:</b>	<b>Cerveny@fau.edu</b>

**COURSE DESCRIPTION:** An in-depth examination of Business Analytics (BA) methods of visualization, data mining, text mining, and web mining using various analytical tools is undertaken. Applications to smaller firms are investigated in a laboratory setting.

**PREREQUISITES:** none

**COURSE OBJECTIVES:** ISM 4403, Advanced Business Intelligence, is a 3 hour projects-based course that provides an in-depth understanding of Business Intelligence (BI) methods of visualization, data mining, text mining, and web mining through the use of specific BI tools. It involves using these tools with publicly available real world business data sets to develop and present actionable analysis. It is further designed to give those with basic Excel knowledge, as well as those with more advanced Excel abilities, more of what organizations need and value for data mining , business analytics and reporting. Additional skills such as when and how to use pivot tables, macros, how to automate and integrate downloads of data into reports with one click, form creation, graphing, and the creation and use of simulation and decision support modeling are all are covered in a hands-on lab setting Using Excel 2010 and VBA. Business analytics as applied to smaller firms is investigated.

**REQUIRED TEXTS:**

**Texts:**

VBA for Modelers, Developing Decision Support Systems with Microsoft Office Excel Fourth Edition by S. Christian Albright, published by South-Western CENGAGE Learning, Mason, OH 45040 ISBN-13: 9781439079843. This book may be purchased from on-line book sellers as well as local bookstores. (Available at Cengage in both hard copy and e-book. Should costs between \$60 and \$110. See <http://www.cengagebrain.com/shop/isbn/9781133190875>)

Analytics at Work: Smarter Decisions, Better Results, by Thomas H. Davenport, Jeanne G. Harris and Robert Morison, Harvard Business Press, Boston, MA, 2010 ISBN-13 978-1-4221-7769-3

(hardcover) This book may be purchased from on-line book sellers as well as local bookstores and in soft cover. . (Should cost somewhere around \$20 .. See Amazon or other on-line sellers.)

**SPECIAL COURSE REQUIREMENTS:**

**Blackboard:** You must use Blackboard to retrieve class notes, take tests, and to receive class e-mail from me. Go to <http://blackboard.fau.edu> to log in.

**E-mail:** Students wishing to send the instructor e-mail messages **must** include ISM 6930 in the subject line. It is your responsibility to check your e-mail frequently. E-mail from me will be sent to your FAU account. If you forward it to another account, you must make sure that is set up correctly.

**Computer:** You must have access to a computer running Excel 2010. FAU open computer labs are available for your use if necessary. There is a student version of the product available at a discount. Also, there is a trial version that is available from Microsoft.

**Web Assist Course:** This course will make use of the Blackboard Internet feature. Lecture material and homework assignments will be posted on Blackboard, with due dates. Grade information will also be found there. We will experiment with an occasional on-line session using Blackboard Collaborate. Additionally there will be occasional on-line discussion periods. The times of these discussion periods will be determined as the semester progresses.

**COURSE EVALUATION METHOD:**

<b>Component:</b>	<b>Weight</b>
Homework	35%
Class Participation	20%
Term Paper	10%
Exams	35%

**Course Grading Scale:**

<b>A</b> = (93-100) %	<b>C</b> = (73-76.99) %
<b>A-</b> = (90-92.99) %	<b>C-</b> = (70-72.99) %
<b>B+</b> = (87-89.99) %	<b>D+</b> = (67-69.99) %
<b>B</b> = (83-86.99) %	<b>D</b> = (63-66.99) %
<b>B-</b> = (80-82.99) %	<b>D-</b> = (60-62.99) %
<b>C+</b> = (77-79.99) %	<b>F</b> = < 60 %

**Important Dates:**

<b>Date:</b>	
<b>1/13</b>	<b>Last day to drop without consequences</b>
<b>1/16</b>	<b>M. L. King Jr. Day, No Classes</b>
<b>1/20</b>	<b>Last day to drop without receiving a “W”</b>
<b>3/2</b>	<b>Last day to drop without receiving a “F”</b>
<b>3/5 -11</b>	<b>Spring Break</b>
<b>4/30</b>	<b>Final Exam Period</b>

Student mastery of the concepts of the course will be demonstrated through the use of homework problems solved by the student, in class discussions of topics between the student and the instructor, in-class team presentations and a combination of in-class and take-home exams and a term paper.

### **POLICY ON MAKEUP TESTS, LATE WORK, AND INCOMPLETES:**

**Homework:** Homework is to be turned in by 4:00 pm on Monday of the week assigned (see course content and tentative schedule attached). Late homework (homework turned in before the assignment has been discussed in class) will lose 10% of its value. Homework turned in after an assignment has been discussed in class returned and/or a solution posted will lose 75% of its original value.

**Teams:** Students will be divided into teams for portions of the course.

**Class Participation:** There will be a discussion of the materials contained in the Davenport text starting the week of 1/30. Two teams will be responsible for leading the discussion each week. One team will lead the discussion and the other will comment on their presentation. However, this is meant to be a class activity so all members of the class are expected to have read the material and be prepared to comment on it.

Each team is to use library resources and/or the internet to find at least two unique references concerning business intelligence/business analytics from **different** sources, analyze the articles and prepare a **wiki** page for each article. A second team will be assigned to edit the **wiki** for each article to insure completeness and readability. All students will be responsible for reading the wikis and participating in the class discussion over the articles, led by the team which created the Wiki. Articles must be substantive, i.e. an announcement of a new product or a new release about a product does not count. The team will turn in a copy of the article when each **wiki** is posted.

We will make use of structured walkthroughs to examine how code is used and developed as part of the class participation activities. Students will be responsible for leading this examination each time.

**Term Paper:** The term paper will be a research paper covering an area of business intelligence of interest to the students. Each team will submit a brief outline of the area to be covered the week of 2/20. The paper itself is due the week of 4/23, when each team will present the results of their research.

**Exams and Exam Make-Up Policy:** There will be two exams during the semester. The last one (the final) is cumulative in this course. These exams will be taken on-line during the time periods noted in the course content outline.

A student who is unable to take an exam due to an emergency must inform me of that fact on or earlier than the day of the exam (except for extreme cases, i.e., you are in a coma in the hospital due to a car accident suffered on the way to the exam) and arrange for a make-up exam before the graded exam is returned to the class. Any student requiring a make-up will have to document his/her excuse (e.g., a letter from a physician written on the physician's letterhead stating the nature of illness **and its severity**). Exams missed without prior approval (or documented proof that the unapproved absence was unavoidable) cannot be made up. In no event will a make-up be given after the graded exam is returned to the class, which is usually the week after the exam is scheduled.

**Incompletes:** University policy states that an incomplete may be given only if a student has a passing grade in the course. An incomplete is only meant for students who are unable to complete the course due to severe hardships beyond their control. It is not meant to accommodate students who decide that the workload is too heavy. If an “I” is given, work must be completed within the time period specified by the instructor which is not to exceed 12 months from the time the incomplete is given.

**Religious Accommodation:** In accordance with rules of the Florida Board of Education and Florida law, students have the right to reasonable accommodations from the University in order to observe religious practices and beliefs with regard to admissions, registration, class attendance and the scheduling of examinations and work assignments. For further information, please see <http://www.fau.edu/academic/registrar/catalog/academics.php>

**Students Representing The University At Official Functions:** Students representing the University at official functions will not be penalized for missing exams or quizzes while performing these functions. Reasonable accommodations will be made to allow the student to make up the work, usually after the majority of the class has taken the exam or quiz. It is up to the student to bring to the instructor’s attention the need for the accommodation, both by presenting the instructor a University form attesting to the need for the accommodation and by reminding the instructor of the event close to its occurrence.

**CLASSROOM ETIQUETTE POLICY:** Inappropriate behavior distracts other students and interferes with their learning experience. Inappropriate behavior would include rude and inappropriate comments in either live or on-line discussions. Additionally, in order to enhance and maintain a productive atmosphere for education, personal communication devices, such as cellular telephones and pagers, are to be disabled in class sessions. Behavioral deviation from these policies will not be tolerated. Since it is my responsibility to provide an environment that is conducive to learning for everyone in the class, I will deduct points from the final grade of a student who chooses to repeatedly distract others. In particularly egregious cases, I will have the student permanently removed from the class.

#### **CODE OF ACADEMIC INTEGRITY POLICY STATEMENT:**

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see the College of Business Academic Honesty Policy at <http://business.fau.edu/undergraduate/current-students/academic-policies/academic-honesty-policy/index.aspx>.

While the FAU Honor Code governs all student activities throughout the course, there are some specific comments which are applicable.

Homework is to be an individual effort. It is certainly permissible to work with other students on assignments, but the final result turned in must be your own work. It is almost impossible for a program of any size above trivial to use identical variables, algorithms and computer memory. Having said that, you may incorporate code you find from other sources as long as you properly reference the sources. (Reuse of code is one of the objectives of object oriented programming after all). However, cheating, plagiarism, and unauthorized collaboration are unacceptable and subject to disciplinary actions. Plagiarism is turning in someone else’s ideas as your own work. Cheating is copying from someone or giving your work to someone else. Such actions may include an “F” in the course and the placement of a

letter of fact in your student record in accordance with the rules of the University and the College of Business.

**DISABILITY POLICY STATEMENT:** In compliance with the Americans with Disabilities Act (ADA), students who require special accommodation due to a disability to properly execute course work must register with the Office for Students with Disabilities (OSD) – in Boca Raton, SU 133 (561-297-3880); in Davie, MOD 1 (954-236-1222); in Jupiter, SR 117 (561-799-8585); or at the Treasure Coast, CO 128 (772-873-3305) – and follow all OSD procedures.

If you are recognized as a student with learning disability by the university, please provide the necessary documentation as soon as possible (no later than the first two weeks of the semester) so that I can make arrangements for you to take tests, etc., according to the prescribed procedures. If you have any other special needs please let me know. If you don't inform me of your special status and arrange for the paperwork with the Office Students with Disabilities, you will be given the same status as the rest of the students in class until you have provided the required information and the Office Students with Disabilities. Grades will not be changed retroactively based on any information provided late.

For further information, please see [http://www.fau.edu/eop/ada/ada\\_policy.php](http://www.fau.edu/eop/ada/ada_policy.php)

**COURSE TOPICAL OUTLINE, INCLUDING DATES FOR EXAMS/QUIZZES, PAPERS, COMPLETION OF READINGS:** The table below contains a schedule of topics by week. Please note that the dates given are the Monday for the class. For example, the material assigned under 1/23 will be the topic for that week. Homework assignments over the material will be found in the assignments section of Blackboard. Assignment due dates are given with the assignments in Blackboard.

### Schedule of Events

Week	Topic	Text	Homework
1/9	Introduction	VBA Ch 1	
1/16	M. L. King Jr. Day, No Class		
1/23	Excel Review & Intro to VBA	VBA Ch 2,4, & 5	
1/30	Analytics at Work Ranges	Dav, Ch 1 VBA Ch 6	HW 1
2/6	Data Control Structures, Excel Objects	Dav, Ch 2 VBA Ch 7 & 8	HW 2
2/13	Enterprise Arrays	Dav, Ch 3 VBA Ch 9	HW 3
2/20	Leadership, Term Paper Outline Subroutines & Functions	Dav, Ch 4 VBA Ch 10	HW 4
2/27	Mid Term Exam		
3/5	Spring Break		
3/12	Targets User Forms	Dav, Ch 5 VBA Ch 11	
3/19	Analysis Error Handling and Advanced User Forms	Dav, Ch 6 VBA Ch 12 & 11	
3/26	Embed Analytics in Business Processes Files, Folders and Databases	Dav, Ch 7 VBA Ch 13 & 14	HW 5
4/2	Build an Analytical Culture Excel/VBA Pivot Tables an Charts	Dav, Ch 8 VBA Ch 15	
4/9	Review Your Business Comprehensively BI Applications	Dav, Ch 9 TBA	HW 6
4/16	Special Topics	Dav, Ch 10 TBA	
4/23	Team Paper presentations	Dav, Ch 11	HW 7
4/30	Final Exam		

The above is tentative and I reserve the right to change it depending upon the progress of the class.