**DSBA 6201-U92 / MBAD 6201-U92 Spring 2016**

**Business Intelligence and Analytics**

<table>
<thead>
<tr>
<th>Instructor:</th>
<th>Jens Kaufmann</th>
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</thead>
<tbody>
<tr>
<td>Office:</td>
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</tr>
<tr>
<td>Phone:</td>
<td></td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:jkaufma7@uncc.edu">jkaufma7@uncc.edu</a></td>
</tr>
<tr>
<td>Office Hours:</td>
<td>TR 10:45-11:45 and by appointment, also before and after class</td>
</tr>
</tbody>
</table>

**Class Hours:** T 5:30pm-8:15pm  
**Venue:** Center City 1001  
**Teaching Assistant:**  
**Email:**  
**Office Hours:**

**Syllabus**

This syllabus contains the policies and expectations I have established for this course. Please read the entire syllabus carefully before continuing in this course. These policies and expectations are intended to create a productive learning atmosphere for all students. Unless you are prepared to abide by these policies and expectations, you risk losing the opportunity to participate further in the course. The standards and requirements set forth in this syllabus may be modified at any time by the instructor. Notice of such changes will be by announcement in class and/or by changes to this syllabus posted on the course Moodle website.

**Catalog Description**

An overview of the business approach to identifying, modeling, retrieving, sharing, and evaluating an enterprise’s data and knowledge assets. Focuses on the understanding of data and knowledge management, data warehousing, data mining (including rule-based systems, decision trees, neural networks, etc.), and other business intelligence concepts. Covers the organizational, technological and management perspectives.

**Pre- or Corequisite(s):** MBAD 5121 or equivalent

**Course Learning Objectives**

1. To understand the meaning and purpose of Business Intelligence and Analytics (BI&A).
2. To be familiar with terminology of the field, basic principles, and concepts of BI&A.
3. To understand Data Warehousing and OLAP as main components of an analytic ecosystem.
4. To be able to use methods of Data Mining, e.g., Classification, Decision Trees, Clustering, and Rule Mining.
5. To learn about organizational concepts like a Business Intelligence Competency Center.

**Course Materials**

Course materials consist of the slides and other materials provided in Moodle as well as information provided in class. The following literature may provide additional information on some of the course’s topics. It is freely available at UNCC library as PDF files. Please note that I will not provide printed copies of the materials.

- **Aggarwal, Charu C. (2015):** Data Mining; ISBN 978-3-319-14142-8  
Grading

Exams: Two exams plus an optional final will be given in this course. Please see the schedule for information on exam content. Please note that content may be subject to change. Information about exams’ focusses will be provided in the last week before the exam in class. Exams are not optional. If you miss exam 1 or 2, you will be able to take part in a final (comprehensive) exam that covers all course work. You can make up only one exam – if you miss exam 1 and 2, you cannot gain more points than you could have gotten with one exam. There will be no makeup for a missed final exam.

Assignments: Assignments will be posted at the end of the class the week before they are due (see schedule). Solutions must be provided via Moodle only. Detailed information on assignments’ tasks and expected work will be given with each assignment. Assignments are due on the given day with the start of class (5:30pm) unless stated otherwise.

Homework: Homework assignments may be given during the semester but will not be turned in for grading. These will count towards class participation.

Attendance & Participation: Attendance & participation are required.

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>33%</td>
</tr>
<tr>
<td>Exam 2</td>
<td>33%</td>
</tr>
<tr>
<td>Assignments (5% each)</td>
<td>30%</td>
</tr>
<tr>
<td>Attendance &amp; Participation</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
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</table>

The final letter grade will be calculated based on the following scale:
A: 90% and above; B: 80-89.9%; C: 70-79.9%; D: 60-69.9%; F: Below 60%.

If necessary, grade distribution and scale are subject to change to adequately reflect the students’ performance.

Other Class Policies

Attendance and Participation Policy
Attendance and participation are required. Attendance may be taken at any point during the class (beginning, middle, and end) and may even be checked multiple times. Tardiness or early departure are disruptive and are, of course, discouraged and will be reflected in the attendance grade as absences. Absence from a class session also implies zero participation for that session.

Absences from class may be excused by the instructor for such reasons as personal illness, religious holidays, or participating as an authorized University representative in an out-of-town event. Whenever possible, students are expected to seek the permission of the instructor prior to absences.
Every student is expected to study materials (notes, solutions, etc.) prior to each class session. Students must be prepared to answer questions on the “current” topic. Discussion questions and quizzes may be used to evaluate preparation/participation and the results will be combined with the attendance record. Homework assignments given during the semester will count heavily towards class participation.

Students will be held responsible for any material covered, announcements made, assignments passed out, and any other type of work that they may miss during any absence from class.

Instructor Absence or Tardiness
If I am late in arriving to class, you must wait a full 20 minutes after the start of class before you may leave without being counted absent, or you must follow any written instructions I may give you about my anticipated tardiness.

Exams
Make-up exams will NOT be given except in cases of serious medical emergencies as evidenced by a written doctor’s excuse provided within 3 days after the exam to my office. Students missing exam 1 or exam 2 with an approved excuse will be allowed to make up the exam at the final (comprehensive) exam. There will be no make-up for the comprehensive final.

Exams are a form of intellectual property belonging to those who create them (your professors). Consequently, exams must remain in my possession or under my control at all times. This means that exams may not be taken out of the room or copied. Students are encouraged to review their exams during office hours or by appointment. However, failure to return an exam after taking or reviewing it or removing an exam from my presence at any time or copying an exam will be considered theft of intellectual property. Such action will result in an exam grade of zero and may warrant further disciplinary action.

Assignments/Projects
This 3-credit course requires three hours of classroom or direct faculty instruction and six hours of out-of-class student work each week for approximately 15 weeks. Out-of-class work may include but is not limited to: required reading, library research, written assignments, and studying for quizzes and exams.

You must complete each individual project/assignment on your own. Any sharing between students will be considered a violation of the Academic Integrity Code and will result at a minimum in a grade of zero for the project/assignment with a possibility for further disciplinary action.

Due Dates Policy
A deadline is like a ticket for a cruise. If you arrive after the scheduled departure time, the ship will have sailed without you and your ticket (homework) will be worthless. Written homework must be handed in within 5 minutes of the scheduled start time for the class period on which it is due. Late homework will not be accepted, and you will receive a zero for that assignment. If you know you will miss class, make arrangements to turn in your work ahead of time.
Grade Appeals Policy
If you believe that the grade you received on an assignment or an exam was in error or unfair, you can appeal to the professor in writing within 7 calendar days after the grades are posted. The appeal should clearly state the reasons why you believe the grade to be unfair or the nature of the error. Overdue appeals will not be considered.

Class Behavior Policy
Disruptive behavior distracts from the ability of others to profit from their in-class experience. Such behavior includes but is not limited to arriving late, leaving early, having side conversations, making unnecessary comments that add no value to the class, surfing the net, and any activities that negatively impact the ability of other students to learn and/or listen in class.

Rude and inappropriate behavior 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 grade of any student who chooses to repeatedly distract others. In particularly egregious cases, I will have the student permanently removed from the class.

Under no circumstances will students be permitted to spend their class time working on assignments for other classes, checking e-mail, surfing the Web, texting, or engaging in activities not related to the class. Attempts to engage in such behavior will be reflected in lower grades and may lead to removal from the course.

Electronic Devices in Class
Use of computing, communication, or other devices during the class time for purposes other than those required for the class is prohibited and may result in being asked to leave the classroom for the remainder of the class period. This includes the use of laptops, lab computers, phones or other devices for Internet browsing, game playing, reading news, emailing, texting, chatting, IM, Facebook, or other activities not required for the class. Cellular phones and other communication devices must be silenced and stored away during class.

Academic Integrity
As a program that helps to create business and government leaders, the College of Business has an obligation to ensure academic integrity is of the highest standards. Standards of academic integrity will be enforced in this course.

University regulations will be strictly enforced in all cases of academic irregularities, cheating or plagiarism or any variations thereof. Students assume full responsibility for the content and integrity of the academic work they submit. The guiding principle of academic integrity shall be that a student's submitted work, examinations, reports, and projects must be his/her own work.

All UNCC students have the responsibility to be familiar with and to observe the requirements of The UNCC Code of Student Academic Integrity (see the Catalog and also http://integrity.uncc.edu/). This code forbids cheating, fabrication or falsification of information, multiple submission of academic work, plagiarism of written materials and software projects, abuse of academic materials (such as library books on reserve), and complicity in academic dishonesty (helping others to violate the code). Additional examples of violation of the Code include:
- Representing the work of others as your own.
- Using or obtaining unauthorized assistance in any academic work.
- Giving unauthorized assistance to other students.
- Modifying, without instructor approval, an examination, paper, record, or report for the purpose of obtaining additional credit.
- Misrepresenting the content of submitted work.

Students are expected to report cases of academic dishonesty they become aware of to the course instructor who is responsible for dealing with them.

For this course, it is permissible to assist classmates in general discussions about the homework. General advice and interaction are encouraged. Each person, however, must develop his or her own solutions to the assigned homework and laboratory exercises. Students may not "work together" on graded assignments. Such collaboration constitutes cheating, unless it is a group assignment. A student may not use or copy (by any means) another's work (or portions of it) and represent it as his/her own. If you need help on an assignment, contact your instructor or the TA, not other classmates.

Any further specific requirements or permission regarding academic integrity in this course will be stated by the instructor, and are also binding on the students in this course. Students who violate the code can be punished to the extent of being permanently expelled from UNCC and having this fact recorded on their official transcripts. The normal penalty is zero credit on the work involving dishonesty and further substantial reduction of the course grade. In almost all cases, the course grade is reduced to "F."

If you are unclear about whether a particular situation may constitute an honor code violation, you should meet me to discuss the situation. Feel free to discuss the definition of cheating and/or plagiarism with me if you are unclear on these terms or have questions about the acceptability of a particular type of action.

The instructor may ask students to produce identification at examinations and may require students to demonstrate that graded assignments completed outside of class are their own work.

**Disability Accommodations**

Students in this course seeking accommodations to disabilities must first consult with the Office of Disability Services and follow the instructions of that office for obtaining accommodations. If you have a disability that qualifies you for academic accommodations, please provide a letter of accommodation from the Office of Disability Services. For more information regarding accommodations, please contact the Office of Disability Services at 704.687.4355 or stop by their office in 230 Fretwell.

**Diversity**

The Belk College of Business strives to create an inclusive academic climate in which the dignity of all individuals is respected and maintained. Therefore, we celebrate diversity that includes, but is not limited to ability/disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.
Incomplete Grade Policy
Receiving a grade of incomplete ("I") is not based solely on a student’s failure to complete work or as a means of raising his/her grade by doing additional work after the grade report time. An incomplete grade can be given only when a student has a serious medical problem or other extenuating circumstance that legitimately prevents completion of required work by the due date. In any case, for a student to receive an 'I' grade, the student's work to date should be passing, he/she must have completed a significant portion of the course, and the student must provide proper written proof (e.g., a doctor’s note) of the extenuating circumstances.

Religious Accommodation for Students Policy
The instructor will observe University Policy 409 (https://legal.uncc.edu/policies/up-409) on matters of religious accommodation. Please note that the procedure prescribed by this policy requires a notice to the instructor prior to the census date of the semester (typically the tenth day of instruction).

Course Changes Policy
The instructor reserves the right to make any necessary changes to the course content, schedule, and policies. Changes will be announced in class and will also be posted online.
## Tentative Class Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Due Dates</th>
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<tbody>
<tr>
<td>Jan 12</td>
<td>Introduction&lt;br&gt;Business Intelligence and Analytics Overview&lt;br&gt;Data Warehousing</td>
<td></td>
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<tr>
<td>19</td>
<td>Data Warehousing&lt;br&gt;OLAP / Reporting</td>
<td></td>
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<tr>
<td>26</td>
<td>Knowledge Discovery in Databases&lt;br&gt;Data preprocessing&lt;br&gt;Regression</td>
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<tr>
<td>Feb 2</td>
<td>Regression</td>
<td>Data Warehouse Assignment</td>
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<tr>
<td>9</td>
<td>Classification, Bayes&lt;br&gt;ROC curves</td>
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<tr>
<td>16</td>
<td>Decision Trees</td>
<td>Regression Assignment</td>
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<tr>
<td>23</td>
<td>Decision Trees&lt;br&gt;Wrap-up</td>
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<tr>
<td>Mar 1</td>
<td><strong>Exam 1</strong> (Everything until and including Feb 23)</td>
<td>Decision Tree Assignment</td>
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<tr>
<td>8</td>
<td>Student Recess - No Class</td>
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<tr>
<td>15</td>
<td>Clustering</td>
<td></td>
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<tr>
<td>22</td>
<td>Clustering</td>
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<tr>
<td>29</td>
<td>Association Rule Mining</td>
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<tr>
<td>Apr 5</td>
<td>Association Rule Mining</td>
<td>Clustering Assignment</td>
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<tr>
<td>12</td>
<td>BI strategy and organization</td>
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<tr>
<td>19</td>
<td>Business Intelligence Competency Center (BICC)</td>
<td>Association Rule Assignment</td>
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<tr>
<td>26</td>
<td>Wrap-up / TBA</td>
<td></td>
</tr>
<tr>
<td>May 3</td>
<td><strong>Exam 2</strong> (Everything after Mar 8)</td>
<td>BI Strategy &amp; BICC Assignment</td>
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<tr>
<td>10</td>
<td><strong>Comprehensive Final Exam (optional)</strong> (Entire Course Material)</td>
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