

# Course Syllabus

ISM 5404

## BUSINESS INTELLIGENCE



### COURSE INFORMATION

- **Course Time Zone:** All the dates and times in all the documents related to this course are based on the **Eastern Time Zone**. Please note that this includes all the deadlines posted on this syllabus and the course website.
- **Credit Hours:** 3 hours
- **Prerequisites:** None



### COURSE INSTRUCTOR

◆ **Dr. Noyan Ilk**

Associate Professor

RBB 142

✉ [nilk@business.fsu.edu](mailto:nilk@business.fsu.edu)



### OFFICE HOURS

Online Office Hours (via Zoom Meetings): Every Thursday between 10 AM - 12 PM

Please use the link below to access the Zoom meeting waiting room. Once in the room, please wait until the instructor admits you into the one-to-one meeting. Students will be invited to the meeting on a first-come-first-serve basis.

**Zoom Link:** <https://fsu.zoom.us/j/7277609078> (<https://fsu.zoom.us/j/7277609078>)



## COURSE DESCRIPTION & OBJECTIVES

Advances in computing technologies have greatly enhanced our ability to collect and store large amounts of data in real-time. Unfortunately, corporations today are said to be data rich but information poor. Business intelligence and analytics techniques can help companies gather information and discover knowledge from these massive data sets.

This course will provide a managerial overview of the state of art technologies and techniques that are used to discover rich and existing patterns for generating business value – i.e. “business intelligence” for organizations. In particular, it will introduce models and methods to identify hidden patterns and gain insights from historical data (descriptive analytics) and to make predictions about future outcomes (predictive analytics). The course will follow a case and lab based approach to introduce and apply these techniques on real-life data sets using specialized software with the purpose of managerial decision support. Upon successful completion, a student will be able to:

1. Understand how to apply business intelligence techniques to support managerial decision making.
2. Explain how to perform data pre-processing and cleaning in unstructured data sets.
3. Perform data visualization and data integration from multiple sources.
4. Demonstrate an understanding of descriptive business intelligence techniques including statistical inference, clustering, association rule mining and text mining.
5. Demonstrate in-depth knowledge of predictive business intelligence models.
6. Understand and explain how to perform model evaluation.
7. Analyze problems drawn from real-world scenarios by interpreting and evaluating data and applying appropriate mathematical, statistical, logical, and/or computational models or principles, using appropriate technology, and explaining the results.



## COMPUTER PROFICIENCY WARNING

This is an **Information Systems** course and it requires familiarity with using computers / specialized software. Certain tasks that might be required to be executed include, but are not limited to: running computer programs, downloading / uploading files, managing computer storage, installing software, accessing FSU's virtual lab and maintaining a network drive, and following computing instructions that were developed on a Windows machine.

This course follows an hands-on learning approach and you are expected to work on lab assignments (using a computer) on a weekly basis. Some of these labs can take several hours to

complete, hence please adjust your workload expectations from this course accordingly.



## COURSE MATERIALS

### Required Software:

- **IBM SPSS Modeler:** This software will be used through the semester for lab sessions as well as for assignments and exams. It will be provided to students through an academic collaboration with IBM (free of charge). There are two methods to access the software:
  - **1. Local Machine Download (Preferred Option):** The student version of the software can be downloaded and installed to your local machines using an academic license that is valid for one year. Please see the Canvas page titled "[Downloading IBM SPSS Modeler \(https://canvas.fsu.edu/courses/270562/pages/accessing-and-downloading-ibm-spss-modeler\)](https://canvas.fsu.edu/courses/270562/pages/accessing-and-downloading-ibm-spss-modeler)" (posted under the Pinned Documents section) for access / installation instructions.
  - **2. College Virtual Lab:** The software can be accessed virtually (using an Internet browser from any machine) via a remote server dedicated to College of Business. You can use the following link to access this server:
    - <https://client.wvd.microsoft.com/arm/webclient>  
(<https://client.wvd.microsoft.com/arm/webclient>)
    - Login with your FSU account and **launch the the SessionDesktop under the cob-avd-workspace**
    - Please note that this option might require you to share files between the virtual server and your local machine. The virtual lab is set up to be synchronized to OneDrive. In theory, you can access any documents stored in your FSU OneDrive accounts during the virtual lab session. However, in practice, there might be some delay during the synchronization process. Therefore, you might need to resort to different sharing options (e.g., e-mailing a file to yourself and accessing your e-mail from the virtual lab).

### Recommended Textbooks:

- R. Sharda, D. Delen, & E. Turban, Business Intelligence, Analytics, and Data Science, 4th Edition, Pearson.
- F. Provost & T. Fawcett, Data Science for Business, 2013, O'Reilly Media.



## COURSE POLICIES

## Course Feedback &amp; Communication

## Course Management System

The course instructor is available to assist with course related issues and students may reach the instructor via online mediums.

Students are encouraged to use the online Office Hours conducted via Zoom to receive one-to-one support from the instructor during the designated weekly periods.

For general course content related questions, you can also send an email to the instructor. Please note that emails that were sent during non-business hours and over the weekends may be subject to delayed responses. Students are encouraged to re-send their emails, if they do not hear from the course instructor in **two business days**.

This course uses the Canvas course management system, which can be accessed at <https://canvas.fsu.edu>. The instructor will use Canvas for content distribution, course assignments and important announcements. Course materials will be made available for student access each Friday throughout the semester. Please note that the course materials are divided into units. Please see the course schedule for the opening dates for each course unit. Students are also highly encouraged to have their Canvas notifications and FSU emails forwarded to their primary email accounts for any updates about the course materials.



## GRADING POLICY

## Exams

## Assignments &amp; Discussion Boards

## Labs

## Project

## Grade Appeals

The course will include two non-cumulative exams. Exams are to be completed individually and will be completed and submitted on the course website. Please see the course schedule for exam availability periods.

Exams will consist of two parts. The first part will include True/False, Multiple Choice and Short Essay questions, whereas the second part will consist of software implementation questions (similar to lab tasks).

There will be a separate Canvas link for each part of the exam and they can be taken independently any time during the exam week.

Both parts of the exams are open book / open notes and students can use any resources available. However, they are time-limited and students are required to complete each part in one sit-in (i.e., once you start a specific part, you need to complete it within a specific time limit).

Make-up exams will only be offered for excused absences (see University Attendance Policy below). The instructor reserves the right to offer make-up exams in an alternate form. The student must notify the instructor at least 24 hours before a missed exam. Missed exams will be entered as a 0 in grade calculations.

There will be several home assignments given throughout the semester. Assignment availability and due dates are indicated in the course schedule. All assignment responses need to be submitted on the course website in PDF format.

In addition to assignments, there will be discussion items and questions posted on the Discussion Board section on the course website. Students are expected to answer these questions and participate in discussions. Student posts on the Discussion Board will be graded.

This is a hands-on course and you will work on several lab exercises throughout the semester. Each lab assignment will provide instructions on how to run a specific business intelligence task. The data sets for these tasks will also be distributed on the course website. Labs will be graded.

One of the course requirements is a semester project. The goal of the course project is to simulate a business problem and its solution using business intelligence techniques. The course project is an individual effort. Detailed information about the project will be given in a separate handout.

While every effort is made to be fair and accurate, you may disagree on the evaluation of your work. If you believe an error has been made in scoring your submission, you may request to see your graded work during office hours in the next five business days after the grade has been posted. Any requests outside the office hours and beyond five days will not be considered.

## LATE SUBMISSIONS

Any deliverable turned in after the due time will be considered late. Please note that all graded material will be posted online and the submission link will be open for a minimum period of one full week. Therefore, students are not expected to miss any of the deadlines.

**Late submissions within 3 days will be graded with a penalty of 20%. Submissions that are 3 – 7 days late will be graded with a penalty of 50%. Submissions that are past 7 days the deadline will not be accepted.**

Note that the leniency with regards to late submissions does not extend to the final deliverables of the semester (e.g., project). Any deliverable submitted during the final grading period (i.e., after the lectures are over and the deadline for the deliverable has passed) will not be considered for grading.



## GRADING SCHEME

Students will be graded on the basis of exams, assignments, labs, project and their participation record on the discussion board. Grading criteria is given below:

Task	Points
Exam 1	250
Exam 2	250
Assignments & Labs	215
Discussion Board	85
Project	150
Participation	50
<b>Total</b>	<b>1000</b>

Grade	Range	Grade	Range	Grade	Range
		A	930 to 1000	A-	900 to 929
B+	870 to 899	B	830 to 869	B-	800 to 829
C+	770 to 799	C	730 to 769	C-	700 to 729

Grade	Range	Grade	Range	Grade	Range
D+	670 to 699	D	630 to 669	D-	600 to 629
		F	599 and below		



## TECHNOLOGY REQUIREMENTS

Course content is accessible through Canvas. Students will need to be able to view videos, write and upload assignments, post to discussion boards, and take assessments. They also need to be familiar with basic computing operations such as downloading / editing files, running applications, and file management. Students should have access to high-speed internet and updated software. Mobile devices may be used to view course content, upload assignments, and take assessments as determined by the instructor.



## TECHNOLOGY SUPPORT

Each student is expected to have access to a sufficiently powerful computer (i.e. hardware), a reliable internet connection, and appropriate software (i.e. an internet browser). Students who do not have **Adobe Acrobat** (<https://get.adobe.com/reader/>) or **PowerPoint software** (<http://its.fsu.edu/service-catalog/communication-collaboration/office-365/microsoft-office-365-proplus>) can download it for free via the instructions linked to each product above or use a campus computer in order to open and view lecture notes and other course related materials.

Below is a list of contact information for technical support @ FSU:

### ODL & Canvas Support

Help with Canvas is available by clicking on the Help menu located on the lefthand most menu on each student's Canvas menu. This link offers multiple ways to request help, including an option to contact ODL's Canvas Support team via message, chat or by calling 850.644.8004.

### FSU Help Desk

FSU's main help desk can be reached at (850) 644-4357. FSU also provides several computer labs throughout its campus and FSU's computers meet all of the course's online technical

requirements.

## FSU Computer Support & FSUID Help

The FSU online learning help desk can be reached at 1-877-FLSTATE (1-877-357-8283) and FSU's Academic Computing ACNS helpdesk can be reached at (850) 644-2591.



## COLLEGE OF BUSINESS POLICIES

### Integrity Code

The Florida State University College of Business expects all of its students, faculty and staff to adhere to the highest standards of academic excellence, integrity, and to the norms of a serious intellectual community. We pledge that:

As business students and professionals  
We understand and accept the  
significance of integrity in  
our language, actions, and work

With Seminole pride,  
we choose to be responsible, honest,  
trustworthy, caring, and fair

In business and in life,  
we choose integrity

Students are expected to be familiar with and abide by the **[Student Academic Honor Policy](http://fda.fsu.edu/sites/g/files/imported/storage/original/application/0ab8e9de6a98c1377d68de971798)** (<http://fda.fsu.edu/sites/g/files/imported/storage/original/application/0ab8e9de6a98c1377d68de971798>) which outlines the University's expectations for students' academic work, and the **[Student Conduct Code](https://dos.fsu.edu/srr/conduct-codes/student-conduct-code)** (<https://dos.fsu.edu/srr/conduct-codes/student-conduct-code>) which informs students about their rights and responsibilities as members of the University community. In addition, the College of Business expects all members of its community to be familiar with and accept the moral norm of **responsible freedom** as outlined in the **[FSU General Bulletin](http://registrar.fsu.edu/bulletin/undergraduate/)** (<http://registrar.fsu.edu/bulletin/undergraduate/>) and to adopt the **[Seminole Creed](https://dos.fsu.edu/resources/the-seminole-creed)** (<https://dos.fsu.edu/resources/the-seminole-creed>).

### Learning Goals



1. Graduates will demonstrate the ability to think critically and manage risk and reward to solve global business problems.
2. Graduates will demonstrate the ability to use technology competently and effectively in global business applications.
3. Graduates will demonstrate in-depth knowledge of core business functions and be able to demonstrate the ability to integrate business functions in organizations.
4. Graduates will demonstrate the ability to communicate effectively, orally and in writing, individually and in teams.
5. Graduates will demonstrate an understanding of and sensitivity to culture, diversity, and professional and ethical responsibilities in business.



## UNIVERSITY POLICIES

### Academic Honor Policy

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to ". . . be honest and truthful and . . . [to] strive for personal and institutional integrity at Florida State University." (**<http://fda.fsu.edu/sites/g/files/imported/storage/original/application/0ab8e9de6a98c1377d68de971798>**)

### First Day Attendance Policy (Mandatory)

FSU has a mandatory first day attendance policy for all classes, including online courses. Students who do not attend the first-day of class will be dropped from the course. For the online version of the course, students can satisfy the first-day attendance requirement by accessing the course's Canvas site before the end of the first day of the semester and following the instructions provided by your instructor. Only students who are enrolled on the first day of the semester must satisfy the first-day attendance requirement. All students who register for this course after the first day of the semester are exempt from the first day attendance requirement. Any student who has been dropped for failing to comply with the first day attendance requirement can re-register for the course during the add/drop period.

Students should confirm their enrollment in this course prior to the end of the add/drop period. Simply because a student continues to have access to this course's Canvas website does not

mean that the student is enrolled in the class. Trust only the FSU's registrar's office to determine whether you are registered for any course.

## University Attendance Policy

Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

## Americans With Disabilities Act (ADA)

Students with disabilities needing academic accommodation should: (1) register with and provide documentation to the Student Disability Resource Center; (2) and bring a letter to the instructor indicating the need for accommodation and what type. Please note that instructors are not allowed to provide classroom accommodation to a student until appropriate verification from the Student Disability Resource Center has been provided. This syllabus and other class materials are available in alternative format upon request. For more information about services available to FSU students with disabilities, contact the:

**[Student Disability Resource Center](http://dos.fsu.edu/sdrc/)** [\\_\(http://dos.fsu.edu/sdrc/\)](http://dos.fsu.edu/sdrc/)

874 Traditions Way 108

Student Services Building

Florida State University Tallahassee, FL 32306-4167

(850) 644-9566 (voice)

(850) 644-8504 (TDD)

Email: [sdrc@admin.fsu.edu](mailto:sdrc@admin.fsu.edu) (<mailto:sdrc@admin.fsu.edu>)

## Free Tutoring for FSU Students

On-campus tutoring and writing assistance is available for many courses at Florida State University.

- Academic Center for Excellence (ACE) is free and is located in the William Johnston Building, Ground Floor (Room G051). High-quality tutoring is available by appointment and on a walk-in basis. These services are offered by tutors trained to encourage the highest level of individual academic success while upholding personal academic integrity.
- For more information, visit the **[Academic Center for Excellence \(ACE\) Tutoring Services](http://ace.fsu.edu/tutoring)** [\\_\(http://ace.fsu.edu/tutoring\)](http://ace.fsu.edu/tutoring) or for a comprehensive list of on-campus tutoring options -

email: [tutor@fsu.edu](mailto:tutor@fsu.edu). ([%20](mailto:tutor@fsu.edu))

## Syllabus Change Policy

Even though all precaution is take in preparing this syllabus, please note that it is subject to change based on the best judgment of the instructor. Please periodically **check website announcements** for possible updates.






## COURSE SUMMARY

All course assignments and texts with due dates are listed below. To be successful in this course, be sure to complete all required assignments and tests by the due date.

**[A tentative course schedule can be reviewed here.](#)**

**<https://canvas.fsu.edu/courses/270562/pages/Course%20Schedule>**

## Course Summary:

Date	Details	Due
Thu Jan 11, 2024	 <b><u><a href="#">First Day Attendance Verification Statement</a></u></b> ( <a href="https://canvas.fsu.edu/courses/270562/assignments/2182119">https://canvas.fsu.edu/courses/270562/assignments/2182119</a> )	due by 11:59pm
Sun Jan 21, 2024	 <b><u><a href="#">Lab: Software Introduction</a></u></b> ( <a href="https://canvas.fsu.edu/courses/270562/assignments/2182127">https://canvas.fsu.edu/courses/270562/assignments/2182127</a> )	due by 11:59pm
Sun Jan 28, 2024	 <b><u><a href="#">Lab: Marketing Response Prediction with Decision Trees</a></u></b> ( <a href="https://canvas.fsu.edu/courses/270562/assignments/2182126">https://canvas.fsu.edu/courses/270562/assignments/2182126</a> )	due by 11:59pm