

Course Syllabus for ISM 6404 Spring 2020 Semester

General Information	
Course Number/CRN	ISM 6404 / CRN 13328
Course Title	BI and Visualization Tools
Semester/Year	Spring/2020
Offering College/Department	Lutgert College of Business (LCOB)/Information Systems and Operations Management (ISOM)
Credit Hours	3
Meeting Times/Location	The class meets on Wednesdays (5:30 - 8:15 PM) at Lutgert Hall 2209. Final Exam on Wednesday (5:45 – 8:00 PM) in LH 2209. Additional learning activities and assignments on the CANVAS Learning Management System at http://canvas.fgcu.edu .
Is this a DL Course?	No. There will be face-to-face meetings.
Method of Delivery	In-class sessions and Internet activities
Course URL	http://canvas.fgcu.edu
Prerequisites	QMB 6303 with a minimum grade of C or QMB 3302 with a minimum grade of C
Instructor Information	
Instructor	Anurag Agarwal, Ph.D., Professor, ISOM department at LCOB; Florida Gulf Coast University
Office Location	3347 Lutgert Hall
Phone Number	239-745-4352
E-Mail Address	aagarwal@fgcu.edu
Office Hours	Tuesday and Thursday 10 AM to 12:30 PM and by appointment
<p>Important Note: All faculty members are required to use Canvas to confirm a student's attendance for each course by the end of the first week of classes. Failure to do so will result in a delay in the disbursement of your financial aid. The confirmation of attendance is required for all students, not only those receiving financial aid. Every student must complete a mandatory activity in Canvas during the first week, which is the "Introduce Yourself" discussion forum in this course.</p>	
Course Information	
Description	<p><u>Catalog Description of the Course</u> Business leaders must have the ability to collect and interpret information from both internal and external sources to make decisions that affect their company's performance. This course uses projects to convey Business Intelligence (BI) methods of visualization of text mining, and web mining through the use of specific BI tools.</p> <p>In this course, students will learn how to present various types of business information graphically to make it easier to understand for decision makers. Different types of data call for different types of charts. Students will learn to distinguish between different types of data and learn to use appropriate tools. Specifically, we will learn to use the following tools: Python, Tableau, Excel Power BI, Rapid Miner and SAS</p>
Student Learning Outcomes	Upon successful completion of this course, students will be able to:

	<p>1. Recognize different types of data and align data with the appropriate visualization instruments <i>Supports LCOB Learning Outcomes:</i> Content/Discipline Knowledge and Skills and Critical Thinking Skills <i>Assessment Methods:</i> Assignments, Quizzes, Discussions</p> <ul style="list-style-type: none"> • Recognize the appropriate data types • Recognize the appropriate chart to be used for each type of data type <p>2. Use some popular BI/Visualization tools <i>Supports LCOB Learning Outcomes:</i> Content/Discipline Knowledge and Skills and Critical Thinking Skills. <i>Assessment Methods:</i> Assignments, Project Report</p> <ul style="list-style-type: none"> • Learn Python for Visualizations • Learn to use Tableau as a BI Tool • Learn to use Excel Power BI as a BI Tool • Learn to use Rapid Miner as a Visualization Tool • Learn SAS as a Visualization Tool • Text Mining/Web Mining <p>3. Apply appropriate Business Intelligence Tools to visualize data and discover insights for business decision making. <i>Supports LCOB Learning Outcomes:</i> Content/Discipline Knowledge and Skills and Critical Thinking Skills <i>Assessment Methods:</i> Assignments, Exams, Reports and Quizzes.</p> <ul style="list-style-type: none"> • Interpret visualizations • Find problem areas
<p>Required Materials</p>	<p>Required Textbook: None. All free, open source materials provided on Canvas.</p> <p>Required Software:</p> <ul style="list-style-type: none"> • Internet access and web browser • PDF reader such as Adobe Acrobat Reader (http://get.adobe.com/reader/) • Microsoft Word, Excel, Power Point. • Tableau (Can be installed for free from Tableau’s website) • Rapid Miner (Can be installed for free from Rapid Miner website) • Excel Power BI (Can be installed for free from Power BI website) • Python IDLE (open source) and Anaconda/Jupyter Notebook (Open source) • SAS (Available at FGCU) • Use http://aets.fgcu.edu/vlab.asp for various software.
<p>Course Topics</p>	<ul style="list-style-type: none"> • Types of Data and Data combinations • Types of Visualization Charts

- Visualization of univariate data
- Visualization of Bivariate data
- Visualization of Multivariate data
- Visualization of Text Data
- Multiple Data Sources
- BI Tool: Tableau
- BI Tool: Excel Power BI
- BI Tool: Rapid Miner
- Visualizations with Python
- Visualizations with SAS

Grading Policy

Quizzes	50
Assignments	100
Final Exam	20
Project	30
Behavior & Attitude	10
Total:	210

Grading Policy: Grading Policy below will be strictly applied. (e.g. 69.99 will be a D+).

Letter Grade	Score Range
A	< 100 - 93%
A-	< 93 - 90%
B+	< 90 - 87%
B	< 87 - 83%
B-	< 83 - 80%
C+	< 80 – 77%
C	< 77 – 73%
C-	< 73 – 70%
D+	< 70 – 67%
D	< 67 – 63%
D-	< 63 – 60%
F	< 60%

There will be 10 assignments worth 10 points each. There will be 5 quizzes worth 10 points each. There will be a final exam worth 20 points. There will be a Project (individual), worth 30 points. 10 points are reserved for good attitude and behavior.

No extra credit or additional assignments:
Please be aware that FINAL GRADES FOR THIS COURSE ARE FINAL. No extra credit or additional assignments are available at the end of the course.

	<p>Turnitin.com: Students who take this class must prepare electronic copies of some or all assignments to submit them to Turnitin.com for the detection of plagiarism. The University expects that all students will be evaluated and graded on their own work. If you use language, data or ideas from other sources, published or unpublished, you must take care to acknowledge and properly cite those sources. Failure to do so constitutes plagiarism. Papers that are submitted to Turnitin.com become part of the Turnitin.com student paper database solely for the purpose of detecting plagiarism.</p> <p>“Credit hour” statement (developed by the LCOB): For each credit of a class, you should expect to spend one hour in class and an average of 2 hours preparing outside of class each week. Therefore, since this is a 3-credit class, you should plan to devote an average of nine hours a week to this class.</p>
<p>Policy regarding missed exams and assignment completion deadlines</p>	<ul style="list-style-type: none"> • Per policy, no make-ups for missed exams are administered (except for authorized and excused absences specified in the university catalog). A student who seeks an authorized or excused absence must submit documentation (such as a physician’s note) to the instructor in a timely manner. See the university catalog for more information. • All assignments are due on Mondays at 11:59 p.m. If the assignment is late up to 24 hours, a 10% penalty will be imposed. If late between 24 to 48 hours, a 25% penalty will be imposed. If late between 48 to 72 hours a 50% penalty will be imposed. Beyond 72 hours, the assignment will not receive any grade. • However, for authorized and excused absences as specified in the university catalog I will consider giving credit for late assignments, on a case by case basis. A student who seeks an authorized or excused absence must submit documentation (such as a physician’s note) to the instructor in a timely manner. See the university catalog for more information. • Unfortunately, "dropped by the University for not paying the full tuition" is not an authorized and excused absence as specified in the university catalog. <p>An emergency situation such as unavailability of or inaccessibility to CANVAS due to network problems will be considered by the instructor on a case by case basis. Students must submit documentation (such as a screenshot of error messages) to the instructor in a timely manner.</p>
<p>Statement on e-mail usage in Eagle Mail and CANVAS email</p>	<p>It is best to use CANVAS mail for the course. However, you may use my work email address (aagarwal@fgcu.edu) also using your Eagle Mail account.</p> <p>Students are expected to check Canvas mail and Eagle Mail on a daily basis.</p>
<p>Last Day to withdraw</p>	<p>Be aware that Friday, March 27 is the last day to withdraw from class without academic penalty. 5 p.m.</p>

Disclaimer	Assignments, schedules & due dates, instructions, and other course information presented in Canvas and MyMISLab are integral components of the course material and are hereby incorporated as part of this syllabus. The instructor reserves the right to change, modify, alter, or transform any part of this syllabus, provided only that notice thereof is given to or at any party or parties that are thereby affected, subject to the rules and regulations of Florida Gulf Coast University.
-------------------	---

University Statements

Academic Behavior Standards and Academic Dishonesty

All students are expected to demonstrate honesty in their academic pursuits. The university policies regarding issues of honesty can be found in the FGCU Student Guidebook under the Student Code of Conduct and Policies and Procedures sections. All students are expected to study this document which outlines their responsibilities and consequences for violations of the policy. The FGCU Student Guidebook is available online at <http://studentservices.fgcu.edu/judicialaffairs/new.html>.

Sanctions for academic dishonesty may include receiving an “F” in this course – FGCU may impose additional penalties.

Any incidents of academic dishonesty may be referred to the FGCU Office of Judicial Affairs. Please look up the definition of plagiarism – it includes copying something off the Internet & submitting it as your own work.

Some examples of what is **not acceptable**:

- Working with another student & turning in the same work (e.g. spreadsheet, database, etc.)
- Emailing or posting your work to let someone else “just see how you did it”.
- Copying someone’s assignment or copying something from a book or the Internet.
- Giving or receiving help from someone (in person, online or on the phone) during an online test.
- Telling someone else what is on a test. Examples of what is **acceptable**:
- Discussing how to approach an assignment with another student.
- Showing someone where they might have made a mistake on an assignment.
- Asking the professor for help.

University Nondiscrimination Statement

Florida Gulf Coast University is committed to ensuring equity and fairness for all University employees, students, visitors, vendors, contractors and other third parties. As such, the University prohibits discrimination on the bases of race, color, national origin, ethnicity, religion, age, disability, sex (including sexual harassment/assault), gender identity/expression, marital status, sexual orientation, veteran status or genetic predisposition with regard to admissions, employment, programs or other activities operated by the University. This prohibition extends to enforcement of Title IX of the Education Amendments of 1972. Questions or complaints should be directed to the Office of Institutional Equity and Compliance (OIEC). The OIEC’s phone number is (239)745-4366; the OIEC email address is OIEC@fgcu.edu.

Disability Accommodations Services

Florida Gulf Coast University, in accordance with the Americans with Disabilities Act and the university's guiding principles, will provide classroom and academic accommodations to students with documented disabilities. If you need to request an accommodation in this class due to a disability, or you suspect that your academic performance is affected by a disability, please see me or contact the Office of Adaptive Services. The Office of Adaptive Services is located in the Wellness Building. The phone number is 239-590-7956 or Video Phone (VP) 239-243-9453. In addition to classroom and campus accommodations, individuals with disabilities are encouraged to create their personal emergency evacuation plan and FGCU is committed to providing information on emergency notification procedures. You can find information on the emergency exits and Areas of Rescue Assistance for each building, as well as other emergency preparedness materials on the Environmental Health and Safety and University Police Department websites. If you will need assistance in the event of an emergency due to a disability, please contact Adaptive Services for available services and information.

Student Observance of Religious Holidays

All students at Florida Gulf Coast University have a right to expect that the University will reasonably accommodate their religious observances, practices, and beliefs. Students, upon prior notification to their instructors, shall be excused from class or other scheduled academic activity to observe a religious holy day of their faith. Students shall be permitted a reasonable amount of time to make up the material or activities covered in their absence. Students shall not be penalized due to absence from class or other scheduled academic activity because of religious observances. Where practicable, major examinations, major assignments, and University ceremonies will not be scheduled on a major religious holy day. A student who is to be excused from class for a religious observance is not required to provide a second party certification of the reason for the absence.

Counseling and Psychological Services (CAPS) provides free counseling and therapy services (including psychiatry) to all FGCU students. Please walk in to the second floor Howard Hall office any week day between 8:30 and 4:30 to schedule an initial contact appointment. Visit the CAPS website at www.fgcu.edu/caps for more information. CAPS offers a 24/7 Helpline at (239) 745-3277 (EARS).

How To Log Into the Course in CANVAS

- If you have not already done so, activate your FGCU EagleMail Account. Your FGCU EagleMail account MUST be activated to log in to CANVAS. If you are a first-time student, you will need your PIN and Eagle ID, both of which are assigned at registration.
 - If you don't know your PIN, you will need to go to the Registrar's Office to retrieve it. To activate your account, visit <http://icarus.fgcu.edu:8080/EagleMail/UpdateAccount.jsp?mode=activate>.
- Log in to CANVAS at <http://canvas.fgcu.edu>. You need to use FGCU EagleMail account and password to log in.

Click "Courses". ○ Select ISM 6404

Tentative Schedule

Week	Day	Dates	Topics	Due Dates
1	Wed	01/08/20	Introduction What is BI What is Data What are the different types of Data Univariate Data Visualizations for Univariate Data in Excel	
2	Wed	01/15/20	Bivariate Data Visualizations for Bivariate Data in Excel Python Fundamentals	
3	Wed	01/22/20	Multivariate Data Visualizations for Multivariate Data in Excel, Pivot Tables Python Fundamentals	Quiz-1 Assign-1 (Excel)
4	Wed	01/29/20	Python Fundamentals	Quiz-2 Assign-2 (Py)
5	Wed	02/05/20	Visualizations with Python	Quiz-3 Assign-3 (Py)
6	Wed	02/12/20	Visualizations with Python	Quiz-4 Assign-4 (Py)
7	Wed	02/19/20	Visualizations with Python	Assign-5 (Py)
8	Wed	02/26/20	Visualizations and Data Management using Tableau	Quiz-5 Assign-6 (Py)
9	Wed	03/04/20	Spring Break (No Class)	
10	Wed	03/11/20	Visualizations and Data Management using Tableau	
11	Wed	03/18/20	Visualizations and Data Management using Excel Power BI	Assign-7 (Tableau)
12	Wed	03/25/20	Visualizations and Data Management using Excel Power BI	
13	Wed	04/01/20	Visualizations and Data Management using Rapid Miner	Assign-8 (P-BI)
14	Wed	04/08/20	Visualizations and Data Management using Rapid Miner	
15	Wed	04/15/20	Visualizations and Data Management using SAS	Assign-9 (RM)
16	Wed	04/22/20	Visualizations and Data Management using SAS	Assign-10 (SAS)
17	Wed	4/29/20	Final Exam (5:45 p.m. to 8 p.m.)	