



# SYLLABUS COLLEGE OF COMPUTING AND SOFTWARE ENGINEERING

# DEPARTMENT OF INFORMATION TECHNOLOGY

IT 4713 (SECTION): Business Intelligence Systems

SEMESTER YEAR

Note

This syllabus provides a general guideline for the conduct of this course. However, deviations may be necessary and will be notified during the semester.

# Course Information

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Class meeting time: SECTION

# Instructor

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**Name**: YOUR NAME

**E-mail/Teams**: YOUR EMAIL

**Office Location**: YOUR OFFICE

Office Hours: M to TH 1PM – 3PM (Virtual on MS Teams), and upon request and appointment.

Preferred method of communication: Teams/KSU Email

**Preferred Communication**:

# KSU Email and MS Teams are the best way to reach the instructor. Avoid D2L email if possible.

# Students’ emails will be replied by the end of the next business day, excluding weekends and holidays.

# Put the course number in the subject line. Emails without proper subject line will not be replied.

# Avoid using personal email. Sensitive information (such as your grades) can ONLY be sent to D2L email or KSU email account.

# Course Description

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This course introduces the concepts, practices, technologies and systems of business intelligence and analytics, which supports data driven insights generation and decision making. The complete process of BI and analytics is covered, from data gathering, modeling, analysis, reporting, and visualization.

Business intelligence systems have been widely adopted and implemented in today’s enterprise environments due to growing amount of data and increasing need for data analytical processing. The IT 4153 course focuses more on general database administration but is limited on some parts of data modeling, integration, query, and reporting. This course is aimed to complement that by focusing on analytical processing technologies and applications.

**Prerequisites/Corequisites**: CSE 3153 database

**Credit Hours:** 3-0-3

# Course Materials

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## Official course website: D2L Brightspace <https://kennesaw.view.usg.edu>

* Refer to this website for all official teaching and learning materials and activities.
* It’s important to know how to use this learning management system for: following learning modules, submitting assignments, checking grades and feedback, downloading files, participating discussion boards, etc.
* Please check the course site regularly for important announcements and other issues.

## Learning materials

* Required textbook: none. There is no textbook assigned. This course uses open education resources. All course materials are provided in D2L.
* Open learning materials at <https://idi.kennesaw.edu/it4713> - This course is part of the Affordable Learning Georgia Textbook Transformation Grants, which aim to lower the cost of learning materials. All materials presented on this site are free to the public (but may not be updated to this semester).

## Other readings and resources

* Other readings and resources will be suggested and posted for each week (module). Check D2L regularly.

## Technology Requirements:

* This class uses D2L as hosting site. Run a system check to ensure your computer work with D2L. Check out UITS D2L training: <http://uits.kennesaw.edu/support/d2ltraining.php> .
* Internet Connection. A high-speed Internet connection such as DSL or cable Internet access is highly recommended. You may also use computer labs on campus to complete the coursework.
* A web camera may be required for a student to take quizzes/exam.

**Required Software/Hardware**

* SQL Server
* Other software: software that can open Word/Power Point/PDF files and ZIP files.

# Course Learning Outcomes

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1. Explain major capabilities and components of a general business intelligence process and system.
2. Design and implement data models for data storage and analysis.
3. Describe and implement data ETL approaches.
4. Conduct data query and analysis.
5. Design data presentation and visual reporting solutions.

# Course/Grading Requirements and Assignments

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| --- | --- | --- | --- | --- |
| **Item** | **Points** |  | **Total Points** | **Grade** |
| Quizzes (5) | 50 |  | =>90 | A |
| Project milestones (5) | 50 |  | =>80 | B |
|  |  |  | =>70 | C |
|  |  |  | =>60 | D |
| *Total* | *100* |  | <60 | F |

Guides and more details about all items will be provided in the content section in D2L Brightspace.

# Grading policy

* The grades for the quizzes and exams will be available 3 days after the end date
* The grades for labs/assignments/projects will be available in 10 days after the due date
* Any late assignment is subject to 20% penalty minimum. Any assignment that is more than a week is subject to more penalty.
* There is no make-up work in this class.
* *I will round up grades if they are > or = .5 or above, for example, an 89.6 is an A, but 79.2 is a C.*

***Midterm Grades:*** *A midterm grade may be assigned by the midterm grade due date identified on the academic calendar. This midterm grade is for assessing mid-semester performance at least one week prior to the last day to withdraw without academic penalty. You may view your midterm grade in Owl Express. Note that only your final grade will be officially recorded on your academic transcript.*

# Course Policies

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**Attendance Policy**

* For on-campus/hybrid section, students are expected to come to each class on time. Stay during the whole class period.
* For both campus/hybrid and online section, students’ attendance is also measured by how often a student login in D2L course website, completion status/time for items in the content section, as well as on-time completion of assignments and labs.

# Assignments & Exam Policy

* All assignments **MUST** be submitted through D2L (<https://kennesaw.view.usg.edu/> ) course website by the deadline specified in course calendar. Email submission will **NOT** be accepted. Any late assignment is subject to 20% penalty minimum. Any assignment that is more than a week is subject to more penalty.
* All quizzes and exams MUST be completed on D2L website by the deadline specified in course calendar. The quizzes exams can’t be opened/submitted after the deadline.
* If you must miss an exam due to illness, you must e-mail or call the instructor before the scheduled time. Failure to notify the instructor prior to the scheduled time will produce an automatic zero for the exam. NO makeup test except for emergencies with proof (e.g. doctor’s slip).

**Instructional Continuity Plan**

Kennesaw State University (KSU) may decide to close campuses, operate on a delayed schedule, or transition to remote instruction for inclement weather or in case of emergency.

The University will announce campus closures, delayed schedules, or remote instruction through KSU Alerts sent to your cell number on file and to your university email account. In addition, announcements will be posted on KSU’s home page: www.kennesaw.edu.

Our class continuity plan includes:

1. Communication: Please check D2L Brightspace, Teams or KSU e-mail for necessary instructions.
2. Virtual Classes: If in-person classes are not possible, we may transition to virtual classes using D2L or Teams.
3. Assignments and Assessments: Deadlines for assignments and assessments may be adjusted to accommodate the emergency situation.

We understand that emergencies create unique challenges. If you need additional support during an emergency, reach out via KSU e-mail or MS Teams. The university also offers resources such as counseling and academic support, which can be accessed remotely.

**Policy on the Usage of Artificial Intelligence**

*You are expected to generate your own work in this class. When you submit any kind of work, you are asserting that you have created it completely on your own unless you indicate otherwise using quotation marks and proper citation for the source(s) you used to help you. Submitting content that has been generated by someone other than you, or that was created or assisted by an AI generative tool is cheating and constitutes a violation of the KSU Code of Academic Integrity.*

*You are welcome to use AI for self-learning, self-practicing, and trouble-shooting purpose only. AI generated work cannot be simply and directly copied without careful reviewing and editing. You should note that all AI generative tools still tend to make up incorrect facts and fake citations, code generation models tend to produce inaccurate outputs, and image/art generation tools can produce copied work or offensive products. You will be responsible for any inaccurate, biased, offensive, or otherwise unethical content you submit regardless of whether it originally comes from you or an AI tool. If you use an AI tool, its contribution must be credited in your submission. The use of an AI tool without acknowledgement is cheating and constitutes a violation of the KSU Code of Academic Integrity.*

# Institutional Syllabus Policies, Procedures, and Resources

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[Federal, BOR, & KSU Required Syllabus Policies and Student Resources](https://www.kennesaw.edu/curriculum-instruction-assessment/academic-program-planning-development/resources/student-syllabus-resources.php)**Course Schedule**

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The course schedule is tentative and is subject to change. Please use D2L course calendar for accurate due dates. *Academic calendar can be found at:* [*https://registrar.kennesaw.edu/academic-calendars/index.php*](https://registrar.kennesaw.edu/academic-calendars/index.php)

The course content is basically organized by learning modules. The following table is a tentative overview of the course content and schedule.

Each module provides a study guide which detailed learning objectives, readings, and tasks. It’s critical to follow these study guides. The time to complete each module varies. Generally, each week requires an average of 8 to 12 hours to complete (for most of the people who have met the prerequisites), depending on individual background and prior experiences. Generally, all module tasks should be completed within one week from the corresponding class date, however, some **required readings/research tasks** must be completed **by the planned class date**. Please follow the study guides closely.

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| --- | --- | --- | --- | --- |
| **Week** | **Learning Module #** | **Module** | **Topics/Activities** | **Work Due and Other Reminders\*** |
| 1 |  | Orientation | Getting started |  |
| 2 | 1 | Introduction | BI overview |  |
| 3 | 2 | MS BI | Microsoft BI, SQL Server | M0, Q0 |
| 4 | 3 | Data Model | Dimensional modeling basics |  |
| 5 | 4 | Data Storage | Data warehouse, data mart |  |
| 6 |  |  | *Work on project milestone* | M1, Q1 |
| 7 | 5 | ETL | ETL Overview, SSDT/SSIS Basics |  |
| 8 | 6 | Transformation | SSDT/SSIS data transformation | Midpoint |
| 9 |  |  | *Work on project milestone* | M2, Q2 |
| 10 | 7 | OLAP | OLAP Overview, OLAP Server, Cube Design |  |
| 11 | 8 | MDX | MDX query language |  |
| 12 |  |  | *Work on project milestone* | M3, Q3 |
| 13 |  |  | *Spring Break* |  |
| 14 | 9 | Excel Pivot | Reporting overview, Excel Pivot Table |  |
| 15 | 10 | Excel Dashboard | Data Visualization with Excel |  |
| 16 | 11 | Power BI | Create Power BI Reports |  |
| 17 |  |  | *Work on project milestone* | M4, Q4 |