

ISTM 4121

This repository contains resources for instructing a university-level course on Database Design & Applications.

university	school	department	semester	course	section	credits
The George Washington University (GWU)	School of Business	Information Systems and Technology Management (ISTM)	Fall 2015 (201503)	Database Design & Applications (4121)	Wednesday Evenings (10)	3

University References:

- Course Description (<http://bulletin.gwu.edu/search/?P=ISTM+4121>)
- Course Schedule (<http://my.gwu.edu/mod/pws/courses.cfm?campId=1&termId=201503&subjId=ISTM>)
- Required Materials (http://www.bkstr.com/webapp/wcs/stores/servlet/booklookServlet?bookstore_id-1=122&term_id-1=201503&div-1=&dept-1=ISTM&course-1=4121§ion-1=10)
- Tentative Final Exam Schedule (<https://registrar.gwu.edu/sites/registrar.gwu.edu/files/downloads/Fall2015TentativeExams.pdf>)

Description

This course is described as:

Theory, architecture, and implementation of database management systems in corporate and organization information systems. Fundamental concepts of database management and processing. Hands-on experience with database management packages.

Subject matter traditionally includes:

- The role of Databases within the context of Information Systems (in Businesses and Organizations)
- Relational Database Usage and Analysis (SQL)
- Relational Database Architecture and Design

Location

building name	room number	address
Duques Hall	351	2201 G Street NW, Washington DC 20052

Schedule

The class meets on Wednesday evenings from 4:00pm to 6:30pm. Class time will include two sessions or roughly equal length (70 minutes) separated by a short (10 minute) break.

time range	usage
4:00pm to 5:10pm	Session I

time range	usage
5:10pm to 5:20pm	Break
5:20pm to 6:30pm	Session II

The class Schedule ([SCHEDULE.md](#)) contains a tentative week-by-week description of the topics and technologies covered in each class, as well as assignments given and due. It may change to reflect the pace of instruction.

Calendar

The class meets from 9/1/15 through 12/9/15. The course Calendar ([CALENDAR.md](#)) reflects the most up-to-date scheduling information, including class times, instructor office hours, holidays, support sessions, and more.

Learning Community

The Learning Community is comprised of a Professor, a Teaching Assistant, and many Students.

Professor

name	nickname	email	academic qualifications	professional experience	email preferences
Michael Rossetti	Mike	rossetti@gwu.edu (mailto:rossetti@gwu.edu)	MS in Information Systems, GWU 2010	LinkedIn Profile (https://www.linkedin.com/in/mikerossetti)	48-72 hour response grace period

Please wait until end of semester to connect with the professor on LinkedIn, and include the course number (ISTM 4121) in your invitation message.

Teaching Assistant

name	email	academic qualifications
Morui Li	limorui@gwmail.gwu.edu (mailto:limorui@gwmail.gwu.edu)	MS in Information Systems, GWU 2016

Students

This course is required for all business students majoring in Information Systems. Currently, **36** students are registered for this offering.

Prerequisites

Each student enrolled in this course is expected to have already taken one of the following courses:

- CSCI 1111 - Introduction to Software Development (Java)
- ISTM 3119 - Introduction to Programming (Visual Basic)
- ISTM 6290 - Python Programming with Database Applications

Learning Objectives

The Learning Community operates for the following purposes:

1. To expand existing subject matter knowledge
2. To improve technology skills
3. To improve communication and presentation skills
4. To improve writing skills
5. To improve the ability to work in teams
6. To leverage technology as an outlet for creativity

Class assignments are designed to reflect and measure performance against these stated learning objectives.

Operations

Teaching Methods

Balance of Theory and Practice

Instruction will take the form of lectures and hands-on working sessions (labs).

Accompanying Textbook

The following text book has been assigned to accompany this course:

title	author	edition	isbn	price range
Modern Database Management	Hoffer	11th	9780132662253	\$120.25 - \$256.50

Relevant material from the textbook will be covered during lectures.

Students may purchase, borrow, or loan the book (or a similar/recent version) for more context.

Evaluation Methods

Student learning will be evaluated through examinations and assignments.

name	weight
Assignments (ASSIGNMENTS.md)	50%
Midterm Exam (exams/midterm.md)	25%
Final Exam (exams/final.md)	25%

Communication and Collaboration

To ensure students receive sufficient instructional support and equal access to the time and attention of instructors, and to provide students with hands-on experience using contemporary business collaboration tools (<http://www.theatlantic.com/technology/archive/2015/07/the-secret-startup-saved-healthcare-gov-the-worst-website-in-america/397784/>) , members of the Learning Community will communicate and collaborate using a specified set of tools and guidelines (COMMUNICATIONS.md) .

Conduct

To foster and promote a positive and successful learning environment, each member of the Learning Community agrees to abide by University Codes of Conduct (CONDUCT.md) .

Calendar

ISTM 4121

Today

◀

▶

September 2015

▼

Print

Week

Month

Agenda

▼

Sun	Mon	Tue	Wed	Thu	Fri	Sat
30	31	Sep 1 1:45pm ISTM 4121 Pr 2:45pm ISTM 4121 Of	2 4pm ISTM 4121 - Da	3	4	5
6	7	8 1:45pm Instructor F 2:45pm Office Hours	9 4pm ISTM 4121 - Da	10	11	12
13	14	15 1:45pm Instructor F 2:45pm Office Hours	16 4pm ISTM 4121 - Da	17	18	19
20	21	22 1:45pm Instructor F 2:45pm Office Hours	23 4pm ISTM 4121 - Da	24	25	26
27	28	29 1:45pm Instructor F 2:45pm Office Hours	30 4pm ISTM 4121 - Da	Oct 1	2	3

Events shown in time zone: Eastern Time

Subscribe

attribute name	attribute value
Calendar ID	0991sfb6ans77vgdh9puaeb518@group.calendar.google.com
XML	https://www.google.com/calendar/feeds/0991sfb6ans77vgdh9puaeb518%40group.calendar.google.com/public/basic (https://www.google.com/calendar/feeds/0991sfb6ans77vgdh9puaeb518%40group.calendar.google.com/public/basic)
ICAL	https://www.google.com/calendar/ical/0991sfb6ans77vgdh9puaeb518%40group.calendar.google.com/public/basic.ics (https://www.google.com/calendar/ical/0991sfb6ans77vgdh9puaeb518%40group.calendar.google.com/public/basic.ics)
HTML	https://www.google.com/calendar/embed? src=0991sfb6ans77vgdh9puaeb518%40group.calendar.google.com&ctz=America/New_York (https://www.google.com/calendar/embed?src=0991sfb6ans77vgdh9puaeb518%40group.calendar.google.com&ctz=America/New_York)

Schedule

Week 1 - 9/2/15

Introduction to this Course

Introduction to Databases (within the context of Information Systems)

Week 2 - 9/9/15

Data Processing and Operations

Database Management Software (DBMS)

Week 3 - 9/16/15

Data Analysis I: Basic Single-table SQL

SELECT, FROM, WHERE, ORDER BY, LIMIT clauses, as well as string and date functions

Data Analysis II: Advanced Single-table SQL

GROUP BY, HAVING clauses, as well as aggregate functions

Week 4 - 9/23/15

Data Analysis III: Multi-table SQL

JOIN and UNION clauses

Relational Databases

Week 5 - 9/30/15

Entity and Relationship Identification

Week 6 - 10/7/15

Midterm Project Pitches

Project, SQL, and ERD Support

Week 7 - 10/14/15

Midterm Exam

Week 8 - 10/21/15

Data Inputs: Validation, Integrity, and Forms

Week 9 - 10/28/15

Data Outputs: Visualization and Reporting

Week 10 - 11/4/15

Normalization I

Week 11 - 11/11/15

Normalization II

Week 12 - 11/18/15

Process Automation

Week 13 - 11/25/15

No Class – Thanksgiving

Week 14 - 12/2/15

Project Support

Week 15 - 12/9/15

Project Final Presentations

12/?/15

Final Exam

Refer to <https://github.com/gwu-business/istm-4121/issues/10> (<https://github.com/gwu-business/istm-4121/issues/10>) for info about the final exam schedule.

Assignments

Assignments will be based on lecture material.

Submitted assignments will be evaluated and grades posted to Blackboard within one or two weeks after submission. Each student is responsible for validating grades on Blackboard.

name	weight	notes
Group Project Assignments	(50% * 60%)	see break-out below
Lab Assignments	(50% * 40%)	see break-out below

Group Project Assignments

name	weight
Mid-term Pitch (assignments/group-project/midterm-pitch.md)	(50% x 60% x 20%)
Final Deliverable (assignments/group-project/final-deliverable.md)	(50% x 60% x 40%)
Final Presentation (assignments/group-project/final-presentation.md)	(50% x 60% x 40%)

NOTE: The project will be assigned no later than September 16th.

Lab Assignments

name	weight	nature
Questionnaire (assignments/lab/questionnaire.md)	(50% x 40% x 5%)	in-class
Meetups (assignments/lab/meetups.md)	(50% x 40% x 15%)	take-home
Database Management Software (assignments/lab/database-management-software.md)	(50% x 40% x 10%)	in-class
Data Analysis (assignments/lab/data-analysis.md)	(50% x 40% x 10%)	take-home

name	weight	nature
Relational Data Analysis (assignments/lab/relational-data-analysis.md)	(50% x 40% x 10%)	take-home
Entity and Relationship Identification	(50% x 40% x 10%)	in-class
Entity Relationship Diagramming	(50% x 40% x 10%)	take-home
Data Inputs	(50% x 40% x 10%)	TBA
Data Outputs	(50% x 40% x 10%)	TBA
Normalization	(50% x 40% x 10%)	TBA

In-Class

In-class lab assignments may be submitted in handwritten form, or in some cases otherwise demonstrated to an instructor.

Students are encouraged to help each-other and work collaboratively, and in some cases may submit a single assignment on behalf of one or more students.

Take-Home

A lab homework assignment is eligible for evaluation if it meets the following submission criteria:

- typed on a keyboard or drawn with an appropriate digital tool
- produced by a single student (discussion is permitted but work product must be unique)
- submitted in print form
- submitted on BlackBoard
- submitted before the start of class on the due date (no exceptions based on geolocation)

Collaboration Tools and Guidelines

Chat

Most course communication and collaboration will take place in the designated Slack (<https://slack.com/>) chat room.

bookmark this: <https://gwu-business.slack.com/messages/istm-4121/> (<https://gwu-business.slack.com/messages/istm-4121/>)

Reference:

- how to emoji (<https://slack.zendesk.com/hc/en-us/articles/202931348-Emoji-and-emoticons>)

Instructional Materials

All class documents and instructional materials are available online in a public GitHub (<https://github.com/>) repository.

bookmark this: <https://github.com/gwu-business/istm-4121> (<https://github.com/gwu-business/istm-4121>)

At any given time, documents in the repository may be at different stages of ideation and completion. The word *todo* signifies intention of updating a document.

If you see a typo, or would like to contribute to the materials, feel free to edit any of the documents (requires a GitHub account; ask an instructor how to "commit").

For convenience, some instructional materials, like the Syllabus, will be posted to Blackboard as well. These documents will be versioned, and may be out-of-date at some times.

Email

All members of the Learning Community have **GWU-issued email addresses**, which may be used for email communications. If emailing an instructor, include ISTM-4121 in the subject.

Assignment Submission

Most assignments will be submitted through Blackboard (<http://www.blackboard.com/>) , mostly for privacy reasons.

bookmark this: <https://blackboard.gwu.edu/> (<https://blackboard.gwu.edu/>)

University Codes of Conduct

Academic Integrity

Although students are encouraged to work with each other to discuss and solve problems, submission of identical or nearly identical work will be seen as an infraction of the honor code and could lead to failure or dismissal. See the Honor Code policy for more information.

Honor Code

Students are to adhere to the Code of Student Conduct, and other policies and regulations as adopted and promulgated by appropriate University authorities. Copies of these documents may be obtained from the Office of the Dean of Students or from the offices of the academic deans. No infractions will be tolerated. Students violating the Code of Student Conduct will be dismissed from class and will receive an “F” for the course.

Religious Holidays

The university policy regarding religious holidays is that it is the student’s responsibility to notify faculty during the first week of the semester of their intention to be absent from class on their days(s) of religious observance. The faculty continues to extend to these students the courtesy of absence without penalty on such occasions, including permission to make up examinations.

Disabilities

Any student who needs an accommodation based on the impact of a disability should contact the Office of Disability Support Services (Marvin Center 242) at 202-994-8250. The DSS will contact the professor. You must inform both your lab and lecture professor about any accommodations that DSS recommends.

Sexual Harassment

See <http://my.gwu.edu/files/policies/SexualHarassmentFINAL.pdf>
(<http://my.gwu.edu/files/policies/SexualHarassmentFINAL.pdf>)