



## **COURSE SYLLABUS**

**Fall 2021**

August 23 – December 10, 2021

Monday & Wednesday 1:00pm – 2:15pm MZ209

**Introduction to Database Systems**

**CS21503-01**

**Computer Science**

**Instructor:** Alan Cook  
**Phone/Text:** 775-538-2526 Mobile  
**E-mail:** [acook@rio.edu](mailto:acook@rio.edu)  
**Office:** Bob Evans Farm Hall – Room 230

**Office Hours:** *Please schedule an appointment online: [2526.us/meet](https://2526.us/meet)  
at least 8 hours in advance to ensure availability*

M/W @BEF230	3:45-4:45p <i>[schedule in advance at <a href="https://2526.us/meet">2526.us/meet</a>]</i>
T/R @Meigs Ctr.	03:45p-04:15p
T/R via MS Teams or phone	01:30-02:30p <i>[schedule in advance at <a href="https://2526.us/meet">2526.us/meet</a>]</i>

Dept. Secretary: 740-245-7373   Office Fax: 740-245-7110  
McArthur Ctr. 740-645-7993   Meigs Center: 740-992-1880   Jackson Ctr. 740-288-0284

**COURSE DESCRIPTION:** This course is an introduction to the concepts of database processing and MIS. Topics include: discussions of major database types, specifically relational databases, discussion of the history of databases and database issues, Database Management Systems (DBMS), SQL queries, updates, data entry, generating reports and forms, and file organization.

**PREREQUISITES:** CS 20103

**CREDIT HOURS:** 3 credit hours

## **TEXTBOOK AND OTHER REQUIRED MATERIALS:**



### **REQUIRED: CENGAGE MINDTAP ACCESS**

MindTap access/eBook with purchase of “Cengage Unlimited”  
<<Complimentary trial access is provided at beginning of course>>

Software: Various open-source products

Access to Rio’s Canvas Learning Management System:  
<http://rio.instructure.com>

MindTap system requirements: [www.tinyurl.com/mindtap-faq](http://www.tinyurl.com/mindtap-faq)  
[e.g., screen resolution must be 1024x768 or larger]

Face-to-Face Students Only:

Flash drive (2GB, or larger) for use with campus computers  
Headphones/earphones for online training during classroom time

**PROGRAM OUTCOMES:** The following outcomes have been adopted for the degree program for which this course is required:

1. Students will use critical thinking and logic skills to formulate and solve problems related to programming and software development.
2. Students will be able to write code in a common programming languages such as Java, C, or Python.
3. Students will be able to explain ethical behavior as it relates to programming and operating computers.
4. Students will be able to Explain fundamental concepts relating to computer operating systems, software, hardware, and architecture.
5. Analyze, design, develop software projects and web applications. The student should be able to explain the different aspects of the software life cycle.
6. Analyze, design, develop, and administer a database system.

**COURSE OUTCOMES:** The following outcomes have been adopted for this course. *All outcomes* listed below have direct relevance to course material. Upon completion of this course students are expected to:

1. Understand different database models
2. Understand the relational database model
3. Understand relational algebra as it relates to SQL
4. Relational Database design and using ER Modeling
5. Structured Query Language (SQL)

**TOPICAL/CLASS OUTLINE:**

1. Introduction to Database systems
2. Database Models
3. The relational Database Model
4. Entity Relationship Modeling
5. Normalization of Database tables
6. Introduction to Structured Query Language (SQL)
7. Advanced SQL

DATE	Reading	Assignments
W1 8/23 8/25	Review syllabus Canvas / Enroll MindTap	Follow Canvas/MindTap for list of assignments
W2 8/30 9/1	Unit 1: Database Systems	
W3  9/8	<i>Univ closed: Labor Day Monday</i> Unit 2: Data Models	
W4 9/13 9/15	Unit 3: The Relational Database Model	
W5 9/20 9/22	Unit 4: Entity Relationship (ER) Modeling	
W6 9/27 9/29	Unit 5: Advanced Data Modeling	
W7 10/4 10/6	Unit 6: Normalization of Database Tables <i>Univ Closed: Friday</i>	
W8 10/11 10/13	<i>MidTerm Week</i> SQL Course online/Udacity SQL L1	
W9 10/18 10/20	Udacity SQL Course L2-3	
W10 10/25 10/27	Udacity SQL L4-5	

W11 11/1 11/3	Unit 7: Intro to SQL	All work must be submitted by Friday Noon
W12 11/8 11/10	Unit 8: Advanced SQL	
W13 11/15 11/17	Unit 9: Database Design	
W14 11/22	<i>Thanksgiving Week</i> Workday: Catch up on missing work <i>University closed Wed-Fri</i>	
W15 11/29 12/1	Special Projects	
W16	Finals Week  Finish Final Projects	Final Projects Due by Thursday midnight

## GRADING POLICIES/TESTING/ASSIGNMENTS/ATTENDANCE/EXPECTATIONS

Grade calculation	% of Grade	Grading Scale
Participation	20%	A = 93 – 100%
Review Qs	15%	A- = 90 – 92%
Problems/Cases	20%	B+ = 87 – 89%
Coding Activities	20%	B = 83 – 86%
Critical Thinking	15%	B- = 80 – 82%
Final	10%	C+ = 77 – 79%
TOTAL	=100	C = 73 – 76%
		C- = 70 – 72%
		D+ = 67 – 69%
		D = 63 – 66%
		D- = 60 – 62%
		F < 60%

**Midterm:** The midterm grade is only an indicator of progress in the course and will be calculated by assessing the work that should be completed at the conclusion of the first half of the course.

**Exams:** Exams for each unit are online through the Canvas course.

**Assignments:** Students should follow the syllabus and Canvas to keep up with weekly assignments (late work may not be accepted or may result in a loss of points/percentage).

Scores from MindTap activity will be pulled back into Canvas and weighted (along with participation, classroom activities, and the final project/exam) to calculate the total course grade (MindTap shows a percentage grade, but may not include missing work and may not indicate your total course grade). MindTap grades may not appear immediately in Canvas and may be delayed.

**Participation:** Classroom participation for face-to-face classes may be graded on classroom activities while online student participation may be graded on completion of online assignments. Face-to-face activities may be required to be completed at the conclusion of the class time. Online students may be required to complete activities as indicated on Canvas/MindTap.

Free access is provided to all students to MindTap at the beginning of course, so all students need to sign in to Canvas and log into the MindTap ebook. Failure to attend the face-to-face course and/or log into MindTap during the beginning of the online course may result in a student being reported for non-attendance.

**Face-to-Face Lab Behavior:** Phones should be set to vibrate or silent to allow students to receive emergency notifications without disruption of the classroom. Devices such as laptops, smartphones, Internet-connected devices and university provided computers should be used ONLY to enhance the course (such as looking up information for discussion/in-class activities, etc.) and NOT become a distraction to the learner or other students in the classroom (texting, etc.). Headphones/earphones (even just in one ear) or non-religious/unapproved headgear (hats or hoods, etc.) that cover ears should not be used/worn during classroom instructional activity time. Students should be aware of and respect posted policies in lab classrooms, such as “no food and drinks”. Students who are not engaged in the face-to-face classroom may forfeit participation points.

**Email Communication:** To avoid messages from being filtered/not delivered, all student and faculty communication should be restricted to official university supplied email addresses. If you need a call back, please include a phone number in your email message. Email messages should always be professional and include your full name and course information (course and section #).

**Incomplete Grades:** Student must meet the requirements for an incomplete grade and submit a completed application (available from the registrar) for an incomplete grade, including an explanation for the request and documentation. The university charges a fee for incomplete grades. The application should be submitted to the instructor before the beginning of finals week.

**Course Survey:** Student are expected to complete a course evaluation survey before the end of the semester through the online evaluation system. Course survey information is requested before the end of the semester, but survey results are withheld from instructors until after grades have been submitted. Course evaluations are necessary for the school's accreditation and assist with the institutional assessment and future planning.

## **ACADEMIC SUPPORT SERVICES**

**Accommodations and Student Accessibility Services:** Students who wish to receive reasonable accommodations due to a qualifying ADA disability, should contact the Office of Accessibility to learn more about requesting accommodations. Students must be registered with the Office of Accessibility in order to receive accommodation services. Those interested in learning more about requesting accommodations or who are not certain whether they have a qualifying disability may contact Stephanie Alexander, PhD, Director of Academic Support Services and Student Accessibility at: [accessibility@rio.edu](mailto:accessibility@rio.edu) or (740) 245-7366. The Office of Accessibility is located in the Academic Support Services Suite, Suite 08, on the ground floor of the Jeanette Albiez Davis Library. The Office of Accessibility offers virtual, phone, and face-to-face appointments.

**Tutoring and Writing Assistance:** The Michael V. and Flora Jenkins Academic Center offers free tutoring in many subjects as well as writing assistance, basic skills instruction, and an open computer lab to all Rio students. To schedule a tutoring appointment or to learn more about tutoring services, contact Kelsey Doughman, MEd (tutoring coordinator and professional math tutoring specialist) at (740) 245-7176 or [jenkinscenter@rio.edu](mailto:jenkinscenter@rio.edu). To schedule a writing assistance appointment or to learn more about using the Jenkins Center "OPS" (online paper service), contact Adam Hollingshead, MA (professional writing specialist) at (740) 245-7333 or [jenkinscenter@rio.edu](mailto:jenkinscenter@rio.edu). The Jenkins Academic Center is located on the ground floor of the Jeanette Albiez Davis Library. The Jenkins Academic Center offers tutoring and writing assistance in virtual, phone, and face-to-face formats.

**MENTAL HEALTH SERVICES:** As a student, you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce your ability to participate in daily activities. Services are available to assist you with addressing these and other concerns you may be experiencing. Contact the Office of Accessibility (740-245-7439) to learn more about the confidential mental health services available to you.

We are Rio. Learning, living, and working in the community are vital to our Mission at URG/RGCC. The COVID-19 pandemic and the risks posed to our community and the world

require that each of us observe heightened well-being and safety measures in the coming academic year. Your safety, health, and well-being, as well as that of our faculty, staff, and guests to campus are our primary concern, and we want to support you in any way that we can. We have expectations that you act responsibly in order to mitigate risk to others. We cannot fully eliminate risk—no one can; however, we can and should mitigate risk. Keep in mind that wearing masks on campus may be mandated and that social distancing should be maintained when possible.

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**ACADEMIC HONESTY & INTEGRITY:** As educational institutions, the University of Rio Grande and Rio Grande Community College seek to nurture a high standard of academic honesty and integrity in students, faculty, and staff. All persons are expected to present and represent their own original work and to fully and properly credit sources of information used in the preparation of their own original work. Any person committing an act of plagiarism, cheating, attendance fraud, or other form of academic dishonesty is subject to the fullest measure of consequences, including course failure and suspension. Repeated violations will subject the student to automatic academic suspension with failing grades for not less than one academic year. Failing grades assigned because of academic dishonesty will not be eligible for forgiveness under the Academic Policy.

**FERPA:** The University of Rio Grande and Rio Grande Community College are committed to fully respecting and protecting the rights of students under the Family Educational Rights and Privacy Act (FERPA). These rights generally include the right to inspect, review and seek amendment to the student's education records and the right to provide written consent before personally identifiable information from education records is disclosed. Under FERPA, students have the right to file a complaint with the US Department of Education concerning alleged failures to comply with FERPA. Please see the Student Records Confidentiality/Rights Under FERPA section of the Student Handbook for details and more information.

**COPYRIGHT:** Materials used in association with this course may be copyright protected. These items are provided for educational purposes and are intended for the use by only those students officially enrolled in the course. Individuals may not copy, duplicate, download, or distribute any of these items outside this course without first considering United States copyright law (Title 17, US Code) and Rio Grande's copyright-related policies.

**WITHDRAWAL:** See the Student Handbook for withdrawal information and the current university course schedule for last day during the semester to withdraw from course.

**\*\* This syllabus is not to be construed as a contract with the student and may be subject to change\*\***