DO NOT TYPE IN THIS BOX

Bulletin # : 2

Academic Year : 2019-20

# FLORIDA INTERNATIONAL UNIVERSITY
# UNIVERSITY CURRICULUM COMMITTEE
## *Proposal for a New Course*

1. **School/College** Engineering and Computing

   **Div./Dept. in Which Taught** School of Computing and Information Sciences

2. | Alpha Prefix | 1st Digit | Last 3 Digits | "C"-lec-lab "L"-Lab | Cr. Hrs. |
   |---|---|---|---|---|
   | CGS | 1 | 540 | | 3 |

   **CIP Code** *(Leave this blank):* _____

3. **Grading Method (select one):** ☒ Graded ☐ Pass/Fail

4a. **Course Title** Introduction to Databases for All

b. **Abbreviated course Title** *(for computer class schedules, transcripts)* Intro to Database for All

LIMITED TO 25 Characters *(including spaces)*

5. **Statewide Course Numbering Subject Matter Area** Computer General Studies

6. **Catalog Description/Major Topics** *(not to exceed 200 characters including spaces)*

*College of Medicine and College of Law: Attach description not exceeding 1,000 characters including spaces.*

Introduction to database concepts including query languages, data organization and modeling, architecture, and security. Emphasis on relational databases with SQL. Not acceptable for CS majors.

7. **Attach detailed syllabus course outline and course justification on separate page(s).**
8. **Prerequisite(s):** None
9. **Corequisite(s):** _____
10. **Objective(s) of Course:**

Students will understand:
What a DBMS and database are,
How to develop and analyze databases,
How to maintain and update databases,
How to query database(s) securely.

11. **Does this course duplicate/overlap other courses at FIU?** ☐ No ☒ Yes

**If yes, please explain:** CGS-2100 doesn't cover databases adequately for Cybersecurity majors. A major component of CGS-2100 is about spreadsheets which is not relevant for Cybersecurity.

12. **What other closely related department(s) have been consulted about this course?** _____

13. **Is this course used for the assessment of a program or a certificate (if yes, then send a notification to assessment@fiu.edu)?** No Yes

**PROPOSAL REQUESTED BY:**

| | | | |
|---|---|---|---|
| **Faculty Contact** | Nagarajan Prabakar | | 10 / 24 / 2019 |
| | **(Type name)** | **(Signature)** | |
| | prabakar@cis.fiu.edu | 305-348-2033 | |
| | **(Email address)** | **(Phone number)** | |
| **Chairperson (Dept./Div.)** | S.S. Iyengar | | 10 / 24 / 2019 |
| | **(Type name)** | **(Signature)** | |
| **Chairperson (Curr. Comm.)** | Wei-Chiang Lin | | 10 / 31 / 2019 |
| | **(Type name)** | **(Signature)** | |
| **College/School Dean** | John Volakis | | 11 / 5 / 2019 |
| | **(Type name)** | **(Signature)** | |

**Submit one original form. Attach one copy of the course justification and course syllabus, course description, objectives, major topics and textbooks.**

**CGS 1540 Introduction to Databases for All**

**New Course Justification**

Database is an essential component of modern technology. With the use of databases highly prevalent in this information era, it is important for all professionals to understand their role in accessing and protecting data.

This course introduces basic concepts of databases with hands-on experience in creating, maintaining, and querying a database. This course will enable students to be familiar with database technology and encourages them to specialize in data science and cybersecurity.

This course must receive the number requested (CGS 1540) in order to match the common prerequisite manual (CIP Code 11.1003, Track 3 of 3) for the new degree program BS in Cybersecurity.

## School of Computing and Information Sciences

**Course Title:** Introduction to Databases for All **Date:** 10/18/19

**Course Number:** CGS 1540

**Number of Credits:** 3

| | |
|---|---|
| **Subject Area:** Database | **Subject Area Coordinator:** Nagarajan Prabakar<br>**email:** prabakar@cs.fiu.edu |
| **Catalog Description:**<br>Introduction to database concepts including query languages, data organization and modeling, architecture, and security. Emphasis on relational databases with SQL. Not acceptable for CS majors. | |
| **Textbook:** " New Perspectives on Microsoft Access 2013, Introductory"<br>by Joseph J. Adamski, Kathy T. Finnegan, Sharon Scollard<br>Cengage Learning, 2013 (ISBN: 1285099214) | |
| **References:** | |
| **Prerequisites Courses:** None | |
| **Corequisites Courses:** None | |

Type: Required

Course Outcomes:

1. Be familiar with DBMS and creating & maintaining a database
2. Master querying a database and analyzing the results
3. Master enhancing a table's design, and creating SQL queries
4. Master queries using SQL to retrieve data from multiple tables.
5. Master secure queries using SQL

**School of Computing and Information Sciences**
**CGS 1540**
**Introduction to Databases for All**

## Course Outline

- Introduction to DBMS
- Introduction to ER Model
- Introduction to Access
- Queries
- Database Maintenance
- Introduction to Reports
- Introduction to SQL queries
- Aggregate functions in SQL
- Using SQL in a DBMS securely

## Course Outcomes Emphasized in Laboratory Projects / Assignments

| | Outcome | Number of Weeks |
|---|---|---|
| 1 | Create a database<br>Outcomes: 1 | 1 |
| 2 | Import data to a database, query database, and analyze results<br>Outcomes: 2 | 2 |
| 3 | Maintain a database<br>Outcomes: 1,3 | 2 |
| 4 | Create basic SQL queries<br>Outcomes: 3,4 | 2 |
| 5 | Create multi-table SQL queries<br>Outcomes: 4 | 2 |
| 6 | Create secure SQL queries<br>Outcomes: 5 | 2 |