* SECTION 1 to be completed by CURRICULUM AUTHOR
* SECTION 2 to be completed by CHAIR/DIRECTOR
* SECTION 3 to be completed by DEAN
* SECTION 4 to be completed by REGISTRAR & STAFF

**SUBMIT TO AREA ADMIN. ASSISTANT AFTER SECTIONS 1-4 ARE COMPLETE TO BEGIN SIGNATURE PORTION OF THE PROCESS.**

* SECTION 5 to be completed by CURRICULUM COUNCIL CHAIR & RECORDER
* SECTION 6 to be completed by VPI

| **SECTION 1: AUTHOR** | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| New, Change or Archive? | | | Modify/Change | | | **Rationale/reasons for this request:**  **1. Restore variable credit,**  **2. Update MCO for accuracy and relevance** | | | | | | |
| Effective Quarter: | | | Fall 2024 | | |
| If proposed course will replace current, when do we archive current course? | | | Choose an item. | | |
| **CURRENT** | | | | | | **PROPOSED** | | | | | | |
| Subject and Catalog # | | | | | | | | | | | | |
| Course Subject and Number: | | | CS 235 | | | Course Subject and Number: | | | (i.e. AGBUS 100. | | | |
| ctcLink Course Number: | | | 40829 | | | ctcLink Course Number: | | | Insert number here. | | | |
| Short Course Title (limit 30 characters) | | | | | | | | | | | | |
| Introduction to Database Theory and Design | | | | | |  | | | | | | |
| Long Course Title | | | | | | | | | | | | |
|  | | | | | |  | | | | | | |
| Course Description | | | | | | | | | | | | |
| In-depth study of database theory and concepts including data modeling, database design, normalization, and data integrity and security. | | | | | | This course offers in-depth study of database theory and concepts including data modeling, database design, normalization, and data integrity and security. Includes a survey of one or more modern database management systems (DBMS) and the underlying query language. Recommended: CS 110. | | | | | | |
| Course Learning Outcomes | | | | | | | | | | | | |
| * Demonstrate knowledge of the fundamentals of Database Systems * Demonstrate understanding of Data Models * Create and understand different database models * Create and understand different entity relationship (ER) Modeling * Demonstrate and understand introduction to Structured Query Language | | | | | | * Demonstrate knowledge of database fundamentals. * Demonstrate an understanding of data models. * Create databases using different database models. * Employ entity-relationship (ER) modeling. * Construct effective Structured Query Language (SQL) queries. * Construct effective SQL joins and NoSQL aggregation pipelines. * Demonstrate an understanding of SQL and NoSQL DBMS. | | | | | | |
| Course Topics | | | | | | | | | | | | |
| * What is a database management * The three levels of the architecture * Informal look at the relational model * An introduction to SQL * The relational model | | | | | | * Database management systems (DBMS) and architecture * The relational model * Introduction to SQL and NoSQL; contrasts of SQL & NOSQL database operations for speed, updates, and scaling * Table, document and graph type databases * Methods of Node.js based Create, Read, Update and Delete (CRUD) functions in SQL and NoSQL frameworks * Database abstractions of application * Building database agnostic abstractions * Data normalization | | | | | | |
| Total Credits/Variable Credit | | | | | | | | | | | | |
| Minimum: | 5 | | Maximum: | | 5 | Minimum: | 1 | | Maximum: | | 5 | |
| Course Components | | | | | | | | | | | | |
| Course Components: | | | Choose an item. | | | Course Components: | | | Choose an item. | | | |
| Quarters Offered | | | | | | | | | | | | |
| Year 1 (list quarters): | | |  | | | Year 1 (list quarters): | | |  | | | |
| Year 2 (list quarters): | | |  | | | Year 2 (list quarters): | | |  | | | |
| Miscellaneous | | | | | | | | | | | | |
| Permit Open Entry/Exit? | | | | Choose an item. | | Permit Open Entry/Exit? | | | | Choose an item. | | |
| Grading Basis: | | | | Choose an item. | | Grading Basis: | | | | Choose an item. | | |
| Instructor/dept. consent required? | | | | Choose an item. | | Instructor/dept. consent required? | | | | Choose an item. | | |
| Hide from Class Search? | | | | Choose an item. | | Hide from Class Search? | | | | Choose an item. | | |
| ***Approved By:*** | |  | | | | ***Date:*** | |  | | | |

| **SECTION 2: CHAIR/DIRECTOR** | | | |
| --- | --- | --- | --- |
| Enrollment Requirements & Equivalencies | | | |
| Prerequisite: |  | Pre-requisite: |  |
| Co-requisite: |  | Co-requisite: |  |
| Equivalencies: |  | Equivalencies: |  |
| Cross-Listed Courses: |  | Cross-Listed Courses: |  |
| *Notes and comments:* | | | |
| ***Approved By:*** |  | ***Date:*** |  |

| **SECTION 3: DEAN** | | | | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CURRENT** | | | | | | | | **PROPOSED** | | | | | | | | | | |
| CONFIRM: Total Credits/Variable Credit | | | | | | | | | | | | | | | | | | |
| Minimum: |  | | Maximum: | |  | | | Minimum: |  | | Maximum: | | | |  | | | |
| Components & Credit-to-Hour Details | | | | | | | | | | | | | | | | | | |
|  | | | | CR | |  | HRS |  | | | | | CR | | |  | HRS | |
| LEC/[Theory](https://www.sbctc.edu/colleges-staff/policies-rules/policy-manual/chapter-5.aspx) (1 CR = 1 hour/week): | | | |  | | x1= |  | LEC/[Theory](https://www.sbctc.edu/colleges-staff/policies-rules/policy-manual/chapter-5.aspx) (1 CR = 1 hour/week): | | | | |  | | | x1= |  | |
| LAB/Guided Practice (1 CR = 2 hours/week): | | | |  | | x2= |  | LAB/Guided Practice (1 CR = 2 hours/week): | | | | |  | | | x2= |  | |
| CLIN/Field-Based (1 CR = 3 hours/week): | | | |  | | x3= |  | CLIN/Field-Based (1 CR = 3 hours/week): | | | | |  | | | x3= |  | |
| Total Credits & Weekly Contact Hours: | | | |  | |  |  | Total Credits & Weekly Contact Hours: | | | | |  | | |  |  | |
| Coding & Financials | | | | | | | | | | | | | | | | | | |
| [CIP](https://www.sbctc.edu/resources/documents/colleges-staff/data-services/data-warehouse/cip-2020-descriptions.pdf) Code: | | |  | | | | | [CIP](https://www.sbctc.edu/resources/documents/colleges-staff/data-services/data-warehouse/cip-2020-descriptions.pdf) Code: | | | |  | | | | | | |
| Default Section Size/Cap: | | |  | | | | | Default Section Size/Cap: | | | |  | | | | | | |
| Course Attributes: | | | Choose an item. | | | | | Course Attributes: | | | | Choose an item. | | | | | |
| Course Attributes: | | | Choose an item. | | | | | Course Attributes: | | | | Choose an item. | | | | | |
| Course Attributes: | | | Choose an item. | | | | | Course Attributes: | | | | Choose an item. | | | | | |
| Fees identified/requested: | | |  | | | | | Fees identified/requested: | | | |  | | | | | | |
| Does a budget exist for this subject? | | | Choose an item. | | | | | Does a budget exist for this subject? | | | | Choose an item. | | | | | | |
| Dean is required to present course to applicable instructional faculty (all campuses) for consideration. Date Presented: | | | | | | | | | | | | | |  | | | | |
| *Notes and comments:* | | | | | | | | | | | | | | | | | | |
| ***Approved By:*** | |  | | | | | | ***Date:*** | |  | | | | | | | | |

| **SECTION 4: REGISTRAR** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **CURRENT** | | **PROPOSED** | | | |
| Coding & Attributes | | | | | |
| Academic Group: | Choose an item. | | Academic Group: | Choose an item. | |
| Academic Org: | Choose an item. | | Academic Org: | Choose an item. | |
| Funding Source: | Choose an item. | | Funding Source: | Choose an item. | |
| Intent: | Choose an item. | | Intent: | Choose an item. | |
| Mult Enrl in Term: | Choose an item. | | Mult Enrl in Term: | Choose an item. | |
| # Completions Allowed: | Choose an item. | | # Completions Allowed: | | Choose an item. | |
| Enrollment Req Group: |  | | Enrollment Req Group: |  | |
| *Notes and comments:* | | | | | |
| ***Approved By:*** |  | | ***Date:*** |  | |

| **SECTION 5: CURRICULUM COUNCIL** | | | |
| --- | --- | --- | --- |
| ***Date Received by Council:*** |  | ***Notes and comments:*** | |
| ***Curriculum Council Reviewer*** |  |
| ***Recorded Vote:*** |  | ***Date:*** |  |
| ***Curriculum Council Chair:*** |  | ***Date Certified:*** |  |

| **SECTION 6: VICE PRESIDENT OF INSTRUCTION** | | | |
| --- | --- | --- | --- |
| ***Notes and comments:*** | | | |
| ***VP of Instruction:*** |  | ***Date:*** |  |