CSCI 4227

Credit Hours: 3
Contact Hours: 4
Course Coordinator: Adam Ogle
Text(s): None

Catalog Description:
A continuation of the study of the use and underlying principles of database design begun in CSCI 4127. Students will learn more of the internal working of database management systems, as well as exploring approaches other than relational. Laboratory use of database software for designing, implementing, debugging, and maintaining database systems will be an integral part of this course.

Prerequisite(s): CSCI 2020 and (CSCI 2210 or CSCI 2910)

CS: MAJOR ELECTIVE

IS: SELECTED ELECTIVE (EITHER CSCI 4127 or CSCI 4227)

IT: SELECTED ELECTIVE (EITHER CSCI 4127 or CSCI 4227)

Course Outcomes:

will be able to analyze disk organization performance tradeoffs - ETSU Outcomes 3a, IS-1, IT-1; ABET Outcomes c, IT-m
will be able to explain the need for and use of transactional locking mechanisms - ETSU Outcomes 3a, IS-1, IT-1; ABET Outcomes c, IT-m
will be able to employ dbms security protocols to secure a server - ETSU Outcomes 3, 5b, IS-1, IT-1; ABET Outcomes c, e.4, IT-m
will be able to maintain user accounts with appropriate privileges - ETSU Outcomes 3a, 5b, IS-1, IT-1; ABET Outcomes c, e.4, IT-m
design effective backup strategies - ETSU Outcomes 3a, IS-1, IT-1; ABET Outcomes c, IT-m
Major Topics:

- DBMS Backup
- DBMS Maintenance
- DBMS Transaction Control
- DBMS Security
- DBMS Architecture
- Data Dictionary Concepts
- Physical Storage Models