

## CPTR2240 - Database Administration

Credits:	3 (2/1/0)
Description:	Students in this course will identify core database concepts and create database models. Installation, configuration and maintenance of a database management system (DBMS) will be covered. Students will analyze and administer a database's performance optimization. Additional topics will include user administration within the database, backup and restoration, and database normalization.
Prerequisites:	<ul style="list-style-type: none"> <li>• CPTR1040</li> <li>OR</li> <li>• CPTR1001</li> </ul>
Corequisites:	
Pre/Corequisites*:	<ul style="list-style-type: none"> <li>• CPTR2224</li> <li>• CPTR2230</li> </ul>
Competencies:	<ol style="list-style-type: none"> <li>1. Practice installation, configuration and management of a database management system.</li> <li>2. Apply and practice knowledge of importing and restoring data into a DBMS.</li> <li>3. Apply and practice knowledge of exporting and backing up data from a DBMS.</li> <li>4. Construct a database using object-oriented modeling.</li> <li>5. Learn and demonstrate entity-relationship database modeling.</li> <li>6. Evaluate current vendor DBMS offerings.</li> <li>7. Compare and contrast current technologies of a relational database, object-oriented DB, NoSQL and flat file.</li> <li>8. Understand, differentiate and demonstrate database replication and mirroring.</li> <li>9. Employ appropriate tools to ensure health of DBMS.</li> <li>10. Define database normalization.</li> <li>11. Apply database optimization methods.</li> <li>12. Communicate database designs and changes to appropriate stakeholders.</li> </ol>
MnTC goal areas:	None

\*Can be taking as a Prerequisite or Corequisite.