



CSTP 2101: Database Management and Storage

EFFECTIVE DATE

September 2019

DEPARTMENT

Computer Systems Tech Diploma

DESCRIPTION

This is an advanced course in database management systems, data storage and related topics. Students learn about modern computer system storage requirements, SaaS (Storage as a Service), raw storage media and volume management, Redundant Array of Inexpensive Disks (RAID) system configuration, remote file systems, and various levels of access (file level vs block level). On the database side, students learn how to backup and perform recovery on a database in a fast and efficient manner and to tune the database to maximize performance. Backup and recovery topics include: instance and media recovery structures, configuring the database archiving mode, user-managed backup and recovery, automatic backup and recovery, database maintenance, importing and exporting, and loading data.

CREDITS

3.0

YEAR OF STUDY

2nd Year Post-secondary

PREREQUISITES

CSTP 1201 Introduction to Database Management Systems (DBSM)

COREQUISITES

None

COURSE LEARNING OUTCOMES

Upon successful completion of this course, students will be able to:

- Describe the components of enterprise storage systems
- Explain the potential causes of database failures
- Identify and configure instance and media recovery structures
- Configure the database archiving mode on a database
- Perform user managed / automatic backups

- Setup a "Storage as a Service" (SaaS) using Azure and tune and maintain it
- Perform user managed / automatic recovery on a database

PRIOR LEARNING ASSESSMENT & RECOGNITION (PLAR)

None

HOURS

Lecture: 30

Lab: 30

INSTRUCTIONAL STRATEGIES

Instructional strategies include classroom lectures, demonstrations, group discussions, computer lab and hands-on practical work.

GRADING SYSTEM

Letter Grade (A-F)

PASSING GRADE

C

EVALUATION PLAN

Type	Percentage	Assessment activity
Assignments	40	4 assignments 10% each
Project	20	
Midterm Exam	20	
Final Exam	20	

COURSE TOPICS

- Components and functions of database management systems (DBMSs)
- Model users' data requirements using conceptual modeling techniques
- Transform data models into normalized database designs
- Referential integrity through constraints
- Relational database designs and design views
- SQL statements to modify data and to retrieve data from multiple table

- Transaction management and concurrency control
- Non-procedural queries
- Query optimization techniques

LEARNING RESOURCES

None

Notes:

- Course contents and descriptions, offerings and schedules are subject to change without notice.
- Students are required to follow all College policies including ones that govern their educational experience at VCC. Policies are available on the VCC website at:
<https://www.vcc.ca/about/governance--policies/policies/>.
- To find out how this course transfers, visit the BC Transfer Guide at <https://www.bctransferguide.ca>.

Broadway campus

1155 East Broadway
Vancouver, B.C. Canada
V5T 4V5

Downtown campus

250 West Pender Street
Vancouver, B.C. Canada
V6B 1S9

Annacis Island campus

1608 Cliveden Avenue
Delta, B.C. Canada
V3M 6P1

604.871.7000

VCC.ca

Generated at: 9:53 am on Jun. 20, 2021