

DATABASE DEVELOPER: CP

Certificate of Proficiency | 31 credit hours minimum

Area of Interest: Science, Technology, Engineering, and Math (STEM)

Program Website (<https://stlcc.edu/programs-academics/pathways/s-t-e-m/database-developer/>)

Academic Advising (<https://stlcc.edu/admissions/advising/>)

Program Description:

The Database Developer Certificate of Proficiency prepares individuals to design and manage the construction of databases and related software programs and applications, including the linking of individual data sets to create complex searchable databases (warehousing) and the use of analytical search tools (mining). Includes instruction in database theory, logic, and semantics; transactional and warehouse modeling; dimensionality; attributes and hierarchies; data definition; technical architecture; access and security design; cloud services; integration; formatting and extraction; data delivery; index design; implementation problems; planning and budgeting; and client and networking issues.

Locations. This program is offered in its entirety at Meramec.

Related Programs. The Computer and Information Technology Department offers an associate in the following area:

Software Developer, Associate in Applied Science
(<http://catalog.stlcc.edu/programs/software-developer-aas/>)

Cost of Attendance. For more information on cost of attendance visit MoSCORES (<https://scorecard.mo.gov/Search/>).

Program Career and Salary Information. Pursuant to Missouri HB 1606 (2018), information regarding the number of credit hours, program length, employment rate, wage data, and graduates employed in careers related to their program of study at St. Louis Community College can be found at the following URL: <https://scorecard.mo.gov/scorecard/> (https://www.google.com/url?q=https://scorecard.mo.gov/scorecard/&sa=D&ust=1555536894857000&usg=AFQjCNG1xf3E_i2lO96zEytILO-s5xaJCQ). Search using School / Program “St. Louis Community College” and choose the degree or credential type of interest.

The following limitations to the data apply: Information provided is based on the most recent cohorts available. Typically, most recent cohorts for wage and completion data are six years prior to the current academic year. Time to complete a program of study varies depending on the number of credit hours students earn per semester.

Interested in this program? Start the enrollment process by visiting the Apply to STLCC (<https://www.stlcc.edu/admissions/apply-to-stlcc/>) page.

At the completion of the program, students are expected to:

1. develop database management systems that comply with current industry standards.

2. develop fast and secure data-centric applications using advanced SQL and reporting tools.
3. manage database systems for efficient storage, processing and data retrieval.
4. tune database queries for maximum high performance.
5. implement distributed cloud server systems.
6. mitigate against the common security vulnerabilities of database systems.
7. design transactional and data warehouse databases.
8. develop data-driven applications integrated with database systems.
9. deploy analytical search tools for extraction and data mining.

Code	Title	Credit Hours
Program Requirements		
IS 120	Introduction to Excel	1
IS 153	C# Programming I	4
or IS 187	Java Programming I	
or IS 167	C++ Programming I	
IS 225	Database Management	4
IS 229	Unix/Linux I	3
IS 240	SQL and Database Development	3
IS 257	Big Data Analytics	3
Select one of the following:		3
IS 268 SQL Server Programming		
IS 276 Oracle Programming		
Select one of the following:		4
IS 287 Java Programming II		
IS 267 C++ Programming II		
IS 253 C# Programming II		
Electives		
Select 6-8 credit hours:		6-8
IS 285	Excel for Data Analytics	
IS 237	Fundamentals of Information Assurance/Security - CompTIA Security+	
IS 241	Systems Analysis and Design	
IS 280	Python	
IS 283	C# Programming III	
IS 288	Java Programming III	
IS 290	C# Frameworks: .NET Web App Framework	
IS 291	Workplace Learning: Computer and Information Technology	
IS 294	Java Frameworks: Struts and Hibernate	
IS 296	Java Frameworks: Spring	

Total Credit Hours **31-33**

Full-Time Academic Plan

PLEASE NOTE: If you originally enrolled at STLCC prior to Spring 2024, you may need to view an archived catalog (<https://www.stlcc.edu/programs-academics/course-catalog/>) for your correct program requirements. Please speak with an advisor or the program coordinator for more information.

Code	Title	Hours	Prerequisites	Milestones/Notes
First Year				
Fall				
IS 120	Introduction to Excel	1	Reading Proficiency	
IS 153 or 187 or 167	C# Programming I or Java Programming I or C++ Programming I	4	Reading Proficiency	
IS 225	Database Management	4	Reading Proficiency	
IS 229	Unix/Linux I	3	Reading Proficiency	
Elective		3-4		
	Credit Hours	15-16		
Spring				
IS 240	SQL and Database Development	3	IS 225 with a minimum grade of "C" and Reading Proficiency	First 8 weeks
IS 257	Big Data Analytics	3	IS 225 with a minimum grade of "C" and Reading Proficiency	Apply for graduation
IS 268 or 276	SQL Server Programming or Oracle Programming	3	IS 240 with a minimum grade of "C" and Reading Proficiency	Second 8 weeks
IS 253 or 287 or 267	C# Programming II or Java Programming II or C++ Programming II	4	IS 153 or IS 167 or IS 187 or IS 166 with minimum grades of "C" and Reading Proficiency	
Elective		3-4		
	Credit Hours	16-17		
	Total Credit Hours	31-33		

*Click on the hyperlinked course number to view additional information about the course.

**Students completing a course that has been assigned a MOTR number may transfer that course to any public institution in Missouri. Those who complete CORE 42 requirements will have that verification on their transcript.

*** It is your responsibility to verify that the courses listed above will transfer to the four-year institution of your choice. Maximize your transfer credits/classes by meeting with an academic advisor.