

# CIS PROFESSIONAL IN PYTHON PROGRAMMING (CERTIFICATE M0675)

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## Business Division

### Certificate M0675

The CIS Professional in Python Programming certificate prepares students for a career in computer programming. It is intended for returning CIS professionals with several years of experience or current students who have completed several CIS courses. Emphasis is placed on object-oriented programming, database programming, developing a graphical user interface, web development, and web scraping. Students will demonstrate the ability to create business-oriented applications using Python programming language; demonstrate effective object-oriented design techniques; write effective program documentation, and demonstrate program troubleshooting skills. Opportunities available after the completion of this certificate include standalone applications, database, web based, web scraping, and business applications.

### Required Courses

Course Prefix	Course Name	Units
CISP 10	Principles of Object-Oriented Design	2.5
CISP 71	Programming in Python	3
CISP 71L	Programming in Python Laboratory	0.5
CISP 74	Advanced Programming in Python	3
CISP 74L	Advanced Programming in Python Laboratory	0.5
<b>Total Units</b>		<b>9.5</b>

### Program Learning Outcomes

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.