

# IOS AND MACOS DEVELOPMENT, BASIC CERTIFICATE



College(s): TR

Program Code: 0460

The iOS and MacOS Development basic certificate (BC) program will guide students through a full exploration of coding tasks via various teaching modalities to develop, design, and build applications for Apple devices and environments. Students will create a digital portfolio where they will maintain ideas, prototypes, and apps as well as explore design concepts, advertising, and management of various support software applications. Student will gain knowledge and skill to management devices and software.

## Program Requirements

| Code                                 | Title                                 | Hours     |
|--------------------------------------|---------------------------------------|-----------|
| <b>Required Program Core</b>         |                                       |           |
| CIS 103                              | Fundamentals of Programming           | 3         |
| CIS 117                              | Introduction to Apple Development     | 3         |
| CIS 201                              | Advanced Apple Development            | 3         |
| NET TEC 101                          | Client-Server Database I              | 3         |
| <b>Program Electives</b>             |                                       | <b>6</b>  |
| Select two of the following courses: |                                       |           |
| CIS 119                              | Apple User Management                 |           |
| CIS 113                              | Human-Computer Interaction            |           |
| EDUC 226                             | Foundations of Educational Technology |           |
| <b>Total Hours</b>                   |                                       | <b>18</b> |

## Pathway

This is an **example course sequence** for students interested in pursuing iOS and MacOS Development. This does not represent a contract, nor does it guarantee course availability. If this pathway is followed

as outlined, you will earn a Basic Certificate (BC) in iOS and MacOS Development.

## Semester-by-Semester Program Plan for Full-Time Students

All plans can be modified to fit the needs of part-time students by adding more semesters.

| Semester 1                           |                                   | Hours     |
|--------------------------------------|-----------------------------------|-----------|
| CIS 103                              | Fundamentals of Programming       | 3         |
| CIS 117                              | Introduction to Apple Development | 3         |
| <b>Hours</b>                         |                                   | <b>6</b>  |
| Semester 2                           |                                   | Hours     |
| CIS 201                              | Advanced Apple Development        | 3         |
| Program Elective (p. 1) <sup>1</sup> |                                   | 3         |
| <b>Hours</b>                         |                                   | <b>6</b>  |
| Semester 3                           |                                   | Hours     |
| NET TEC 101                          | Client-Server Database I          | 3         |
| Program Elective (p. 1) <sup>1</sup> |                                   | 3         |
| <b>Hours</b>                         |                                   | <b>6</b>  |
| <b>Total Hours</b>                   |                                   | <b>18</b> |

<sup>1</sup> Program Elective (p. 1)

## Program Electives

| Code     | Title                                 | Hours |
|----------|---------------------------------------|-------|
| CIS 113  | Human-Computer Interaction            | 3     |
| CIS 119  | Apple User Management                 | 3     |
| EDUC 226 | Foundations of Educational Technology | 3     |

Choose your courses with your College Advisor.

## Careers

This program can prepare students for the jobs listed below. Click on each one to learn more, including average earnings, annual job openings, and how much education people in that field have. For additional guidance and resources on career options, current City Colleges students and alumni can contact the Career Services Office (<https://www.ccc.edu/departments/Pages/Career-Services.aspx>).

### Computer Programmers

#### Job Description

Create, modify, and test the code and scripts that allow computer applications to run. Work from specifications drawn up by software and web developers or other individuals. May develop and write computer programs to store, locate, and retrieve specific documents, data, and information.

#### Salary Based on Experience Level

Take a look at the average hourly/annual earnings for this career in Cook County

Lightcast earnings figures are based on OES data from the BLS and include base rate, cost of living allowances, guaranteed pay, hazardous-duty pay, incentive pay (including commissions and bonuses), on-call pay, and tips.

##### Annual Wages

|  |           |
|--|-----------|
| Entry-Level 10 <sup>th</sup> Percentile  | \$53,206  |
| Median 50 <sup>th</sup> Percentile       | \$86,676  |
| Senior-Level 90 <sup>th</sup> Percentile | \$180,557 |

##### Hourly Wages

|  |      |
|--|------|
| Entry-Level 10 <sup>th</sup> Percentile  | \$26 |
| Median 50 <sup>th</sup> Percentile       | \$42 |
| Senior-Level 90 <sup>th</sup> Percentile | \$87 |

#### Annual Job Openings

48 annual openings in Cook County

#### National Education Attainment

Here, you can see the level of education that people in this career complete.

| Degree Program                    | % of Jobs |
|-----------------------------------|-----------|
| A high school diploma or less     | 0.00%     |
| A certificate                     | 0.00%     |
| Some college                      | 2.52%     |
| An Associate degree               | 8.99%     |
| A Bachelor's degree               | 88.04%    |
| A Master's or Professional degree | 0.45%     |
| A Doctoral degree or more         | 0.00%     |

88.49% continue their education beyond an associate degree

### Software Developers

#### Job Description

Research, design, and develop computer and network software or specialized utility programs. Analyze user needs and develop software solutions, applying principles and techniques of computer science, engineering, and mathematical analysis. Update software or enhance existing software capabilities. May work with computer hardware engineers to integrate hardware and software systems, and develop specifications and performance requirements. May maintain databases within an application area, working individually or coordinating database development as part of a team.

#### Salary Based on Experience Level

Take a look at the average hourly/annual earnings for this career in Cook County

Lightcast earnings figures are based on OES data from the BLS and include base rate, cost of living allowances, guaranteed pay, hazardous-duty pay, incentive pay (including commissions and bonuses), on-call pay, and tips.

##### Annual Wages

|  |           |
|--|-----------|
| Entry-Level 10 <sup>th</sup> Percentile  | \$77,550  |
| Median 50 <sup>th</sup> Percentile       | \$132,852 |
| Senior-Level 90 <sup>th</sup> Percentile | \$181,453 |

##### Hourly Wages

|  |      |
|--|------|
| Entry-Level 10 <sup>th</sup> Percentile  | \$37 |
| Median 50 <sup>th</sup> Percentile       | \$64 |
| Senior-Level 90 <sup>th</sup> Percentile | \$87 |

#### Annual Job Openings

1384 annual openings in Cook County

#### National Education Attainment

Here, you can see the level of education that people in this career complete.

| Degree Program                    | % of Jobs |
|-----------------------------------|-----------|
| A high school diploma or less     | 0.00%     |
| A certificate                     | 1.41%     |
| Some college                      | 0.00%     |
| An Associate degree               | 3.23%     |
| A Bachelor's degree               | 79.73%    |
| A Master's or Professional degree | 15.64%    |
| A Doctoral degree or more         | 0.00%     |

95.37% continue their education beyond an associate degree

### Web and Digital Interface Designers

#### Job Description

Design digital user interfaces or websites. Develop and test layouts, interfaces, functionality, and navigation menus to ensure compatibility and usability across browsers or devices. May use web framework applications as well as client-side code and processes. May evaluate

web design following web and accessibility standards, and may analyze web use metrics and optimize websites for marketability and search engine ranking. May design and test interfaces that facilitate the human-computer interaction and maximize the usability of digital devices, websites, and software with a focus on aesthetics and design. May create graphics used in websites and manage website content and links.

Salary Based on Experience Level

Take a look at the average hourly/annual earnings for this career in Cook County

Lightcast earnings figures are based on OES data from the BLS and include base rate, cost of living allowances, guaranteed pay, hazardous-duty pay, incentive pay (including commissions and bonuses), on-call pay, and tips.

Annual Wages

|  |           |
|--|-----------|
| Entry-Level 10 <sup>th</sup> Percentile  | \$37,935  |
| Median 50 <sup>th</sup> Percentile       | \$80,560  |
| Senior-Level 90 <sup>th</sup> Percentile | \$144,783 |

Hourly Wages

|  |      |
|--|------|
| Entry-Level 10 <sup>th</sup> Percentile  | \$18 |
| Median 50 <sup>th</sup> Percentile       | \$39 |
| Senior-Level 90 <sup>th</sup> Percentile | \$70 |

Annual Job Openings

131 annual openings in Cook County

National Education Attainment

Here, you can see the level of education that people in this career complete.

| Degree Program                    | % of Jobs |
|-----------------------------------|-----------|
| A high school diploma or less     | 12.50%    |
| A certificate                     | 16.67%    |
| Some college                      | 4.17%     |
| An Associate degree               | 16.67%    |
| A Bachelor's degree               | 50.00%    |
| A Master's or Professional degree | 0.00%     |
| A Doctoral degree or more         | 0.00%     |

50.00% continue their education beyond an associate degree