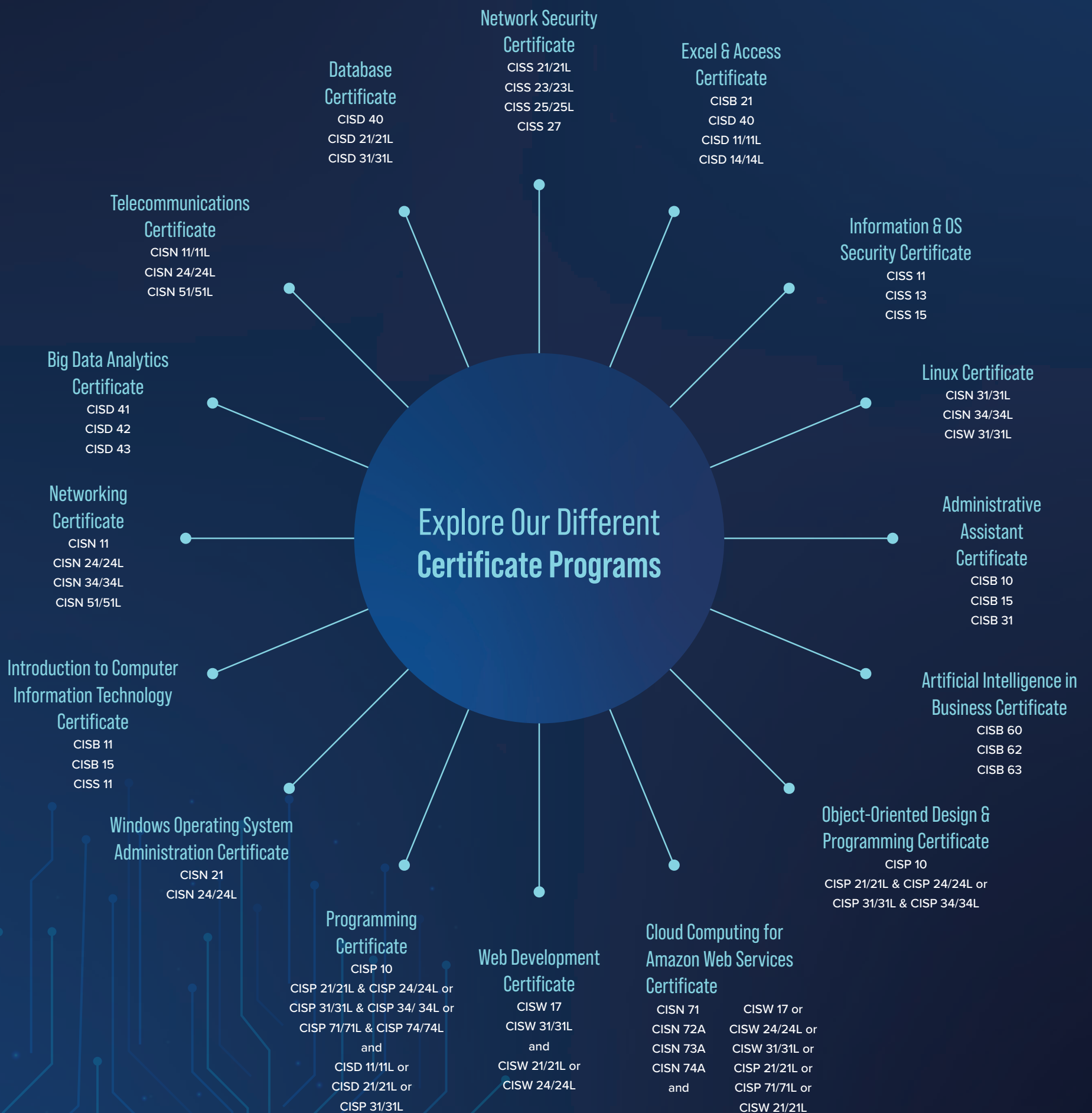


# Student Guide To CIS Certificate Programs

Because the CIS department offers a wide variety of courses, certificates and degrees we have created this guide to help students decide what CIS classes to take each semester. Within each program it is recommended that students take courses in the order they are listed--as courses listed first often provide students the knowledge and skills required by courses listed below it. Before taking courses in a different order than they are listed, it is recommended that you look in the Mt. SAC catalog to see if the course you want to take has any advisory prerequisites.

In the below graphic select the program(s) that interest you and take the courses required to earn a CIS Professional Certificate in that area. A certificate shows employers that you have a skill set in that area. Most of the courses required for a certificate can also be used to earn an AS degree in that area. A complete listing of CIS courses, certificates and degrees is provided at [mtsac.edu/cis](http://mtsac.edu/cis).

If you like computers but are unsure what program to choose, consider one of the new cutting-edge programs of Artificial Intelligence, Big Data Analytics or Cloud Computing. All three of these fields are expected to have large employment growth over the next ten years.



# Student Guide To CIS Degree Programs

There are five CIS degree options to choose from, in addition to four different paths that can be taken in the Computer Programming degree. Each of the following degrees requires the completion of General Education coursework in addition to the courses listed. Please visit the counseling website to learn more about the General Education requirements. <https://www.mtsac.edu/counseling/ge-sheets/>

## Computer Network Administration and Security Management A.S.

### Core Courses:

CISN 11 & 11L	CISS 23 & 23L
CISN 24 & 24L	CISS 25 & 25L
CISN 51 & 51L	CISS 29
CISS 21 & 21L	

### Required Electives:

Choose one lecture or one combination lecture/lab course from the following:

CISB 11	CISP 31 & 31L
CISN 21	CISP 41 & 41L
CISN 31 & 31L	CISS 13
CISN 34 & 34L	CISS 15
CISP 11 & 11L	CISS 27
CISP 21 & 21L	CISS 31

## Computer - Database Management Systems A.S.

### Core Courses:

CISB 11	CISD 40
CISB 15	CISM 11

### Required Electives:

Choose one from the following:

CISN 21	BUSM 20 or
CISN 31 & 31L	BUSA 7

Choose two lecture-lab combinations from the following:

CISD 11 & 11L	CISD 21 & 21L
CISD 14 & 14L	CISD 31 & 31L

## Administrative Assistant A.S.

### Core Courses:

BUSO 25	CISB 16
BUSO 26	CISB 21
CISB 10	CISB 31
CISB 15	CISB 51

### Required Elective:

Choose one from the following

CISD 11 & 11L	CISS 11
CISN 21	CISW 15

## Information Technology A.A.

### Core Courses:

CISB 11	CISB 15
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### Required Electives:

Choose one of the following sequences:

CISP 11 & 11L	CISP 52 & 52L
CISP 21 & 21L	CISP 71 & 71L
CISP 31 & 31L	CISW 21 & 21L
CISP 41 & 41L	CISW 24 & 24L

Choose one of the following sequences:

CISD 11 & 11L	CISD 31 & 31L
CISD 21 & 21L	

Choose one of the following sequences:

CISN 11 & 11L	CISN 31 & 31L
CISN 21	CISN 61

Choose one of the following options:

CISS 13	CISS 21 & 21L
CISS 15	

### Recommended Electives:

Choose one of the following options:

CISB 31	CISM 11
CISB 51	SPCH 26 or SPCH 26H

## Computer Programming A.S.

### Core Courses:

CISB 11	CISM 11
CISB 15	CISN 21 or
CISP 10	CISN 31 & 31L

Choose one of the following groups:

CISD 11 & 11L or	CISD 31 & 31L
CISD 21 & 21L or	

### Required Elective:

Choose one of the following concentrations:

#### C++

CISP 31 & CISP 31L
CISP 34 & CISP 34L

#### Mobile

CISP 52 & CISP 52L
CISP 53 & CISP 53L
CISP 54 & CISP 54L

#### Java

CISP 21 & CISP 21L
CISP 24 & CISP 24L

#### Web

CISW 17
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And choose one from the following options:

CISW 31 & CISW 24 & CISW 31L or CISW 24L
CISW 21 & CISW 21L or