

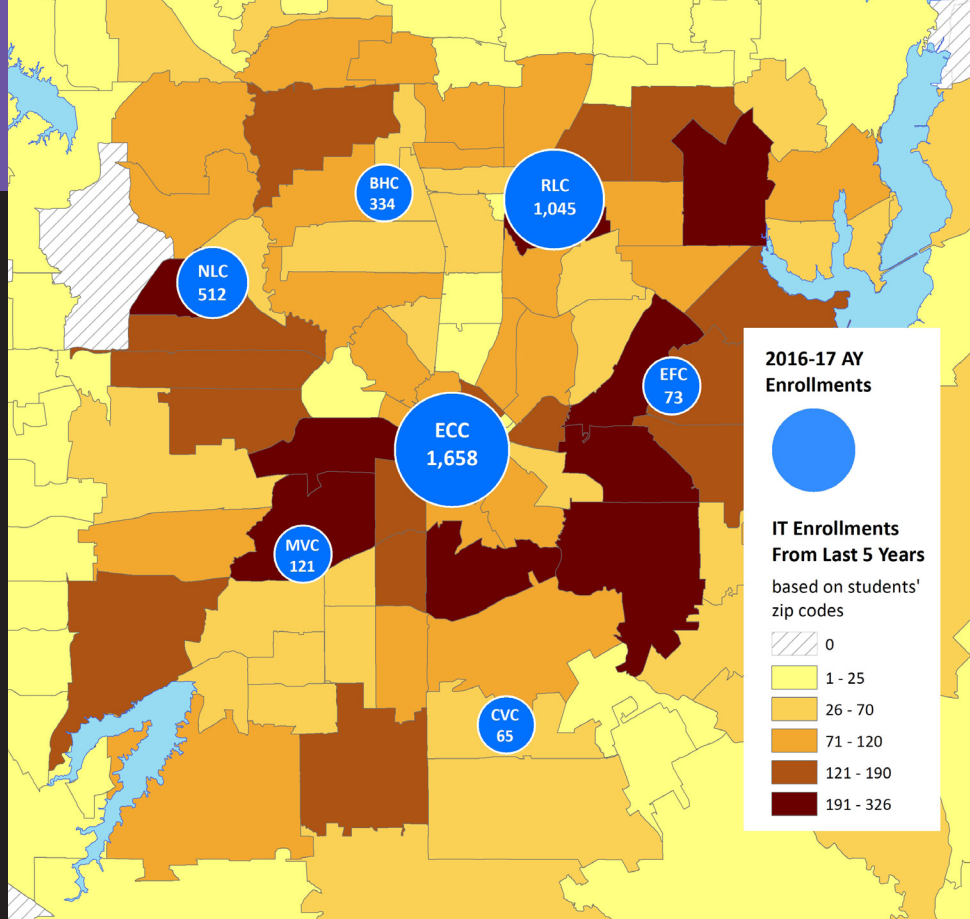
# INFORMATION TECHNOLOGY (IT)

## A PRELIMINARY REVIEW

December 2018

Labor Market Intelligence Center

The IT sector is evolving faster than it can be tracked as many companies increasingly integrate tech-savvy practices to boost efficiency and reach. Exceptionally well-paying jobs will continue to emerge in the sector, and with this, it will become increasingly important to understand our talent pipeline to support this economic development. While Dallas-Fort Worth is carving out its place among notable tech towns in the U.S., Amazon's pass on the DFW for its HQ2 campus proved there is room to grow the number of IT professionals. In efforts to match talent supply to demand, we often focus on the overall numbers but in this report, attention is spotlighted on *how* we are addressing this alignment. While DCCCD offers an extensive number of IT programs throughout its campuses, the options are hard to navigate and programs are not adapting quickly enough to new skills in demand.



### Students report enrolling in IT...

57%

to earn a credential

15%

for transfer credits

14%

for personal enrichment or job related purposes

12%

did not report a reason

### 2016-2017 Academic Year

3,308  
Total Enrollments

Source: SRA

37,200+  
Job Postings

Source: Burning Glass

### IT Alumni Outcomes

Source: Emsi, Alumni Outcomes 2013-2018

Occupation	# of IT Grads 2013-2018	Estimated Average Salary
Computer User Support Specialists	348	\$54,025
Network and Computer Systems Administrators	207	\$89,847
Computer Network Support Specialists	60	\$79,872
Computer Systems Analysts	50	\$96,076
Software Developers, Applications	44	\$104,590
Computer and Information Systems Managers	35	\$154,782
Web Developers	35	\$73,494
Information Security Analysts	35	\$90,681
Computer Network Architects	23	\$110,504
Computer Programmers	21	\$86,558
<b>TOTAL</b>	<b>858</b>	<b>\$94,043</b>

\*Based on 21,000 DCCCD alumni

### About our data source

Emsi Alumni Outcomes dissects over 21,000 DCCCD identifiable alumni profiles and provides their occupations, wages, employers, region, and promoted skills. The source scrapes online job boards and professional networking platforms and links the information to the alum's program of study.

The majority of IT graduates work outside of the field

39%  
IT

56%  
Outside IT

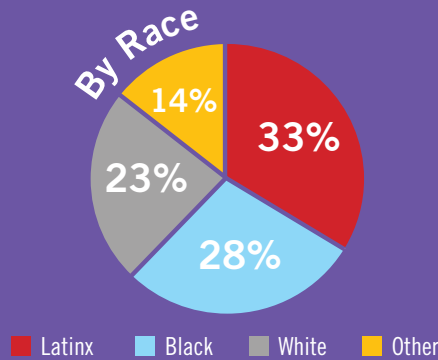
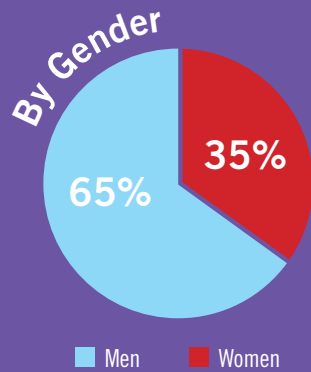
5%  
Not Available

Outside the IT field, other top occupations for DCCCD alumni include:



# Racial diversity is strong, but men dominate enrollments at DCCCD

## 2013-2018 IT Enrollments



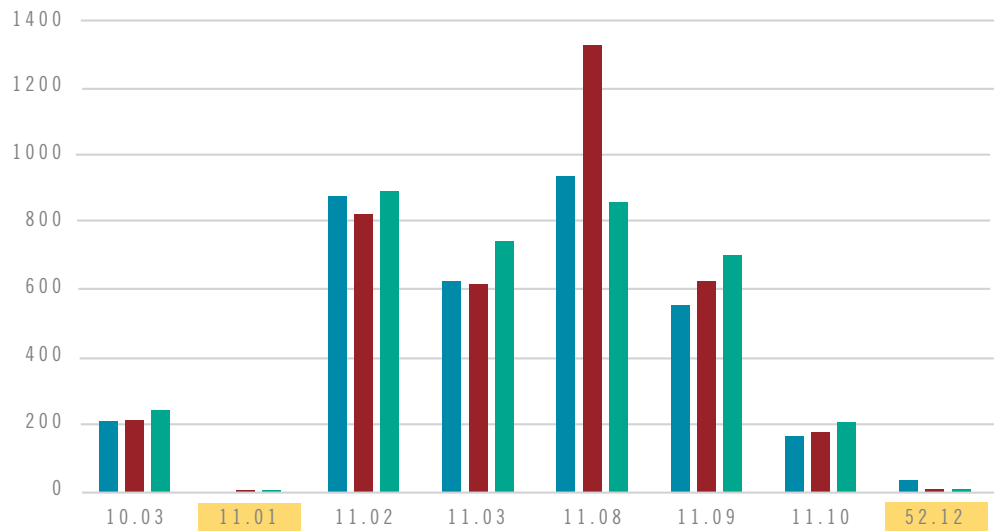
Average age of our students enrolled in IT

33

Several programs have not attracted enrollments including:

- CIP 11.01: Computer and Information Sciences, General
- CIP 52.1201: Management Information Systems, General

## 2015-2018 IT Enrollments



### All DCCCD IT Programs: What Choice Would You Make?

#### NETWORKING/SECURITY

- Network Administrator and Support Assoc.
  - \* Convergence Technology
  - \* CCNA
  - \* Microsoft
  - \* Virtualization/Cloud
  - \* UNIX/LINUX
- Convergence Technology Intern & Technician Cert.
- Information Security Cert.
- Mobile Applications Development Cert.
- Multi-Platform Applications Developer Cert.
- Networking Associate Cert.
- Networking Professional Cert.
- Networking Support Cert.
- SQL Server Cert.
- LINUX System Administrator Cert.
- Cisco Networking Assist. Skills Achievement Award
- Cisco Networking Intern Skills Achievement Award
- Information Security Skills Achievement Award
- IT Security Skills Achievement Award
- UNIX Administrator/Cloud Computing
- Digital Forensics
- Computer Networking
- Computer Information Systems - LAN Server Operator

#### PC SUPPORT

- Personal Computer Support Assoc.
- Help Desk/User Support Technician Cert.
- Personal Computer Specialist Cert.
- Personal Computer User Cert.
- Technology Support Cert.
- Personal Computer Technology & A+ Cert.
- Information Technology Support Specialist I Occupational Skills Award
- Information Technology Support Specialist II Occupational Skills Award
- Computer Information Technology - Help Desk

#### WEB/INTERNET SERVICES

- Web Production and Design Assoc.
- Basic Web Production Assoc.
- Open Source Cert.
- Web Developer Specialist Cert.
- Web Development Cert.
- Web Production and Design Cert.

#### COMPUTER SCIENCE

- CIS - Business Software Programmer/Developer
- CIS - Business Computer Information Systems
- CIS - Personal Computer Support

#### PROGRAMMING

- Software Programmer/Developer Assoc.
- DBA Cert.
- Programmer Level 1 Cert.
- Software Programmer/Developer Assist. Assoc.
- Visual Studio Developer Cert.
- Visual Studio Enterprise Developer Cert.
- Visual Studio Professional Developer Cert.
- Object-Oriented Programming Skills Achievement Award
- Oracle Assoc. Skills Achievement Award
- Oracle Professional Skills Achievement Award
- .NET Programming Skills Achievement Award
- Data Processing Programmer

#### INTERNET DEVELOPMENT TECHNOLOGIES

- Interactive Simulation & Game Technology
- IDT - Web Application Development
- IDT - Interactive Media Development
- IDT - Internet Marketing
- IDT - Web Site System Administration
- IDT - Adv Web Application Development
- IDT - OS Administration

Programs with low enrollments

# Degree Types

52

Certificates

27

Associates Degrees

9

Achievement Awards

## Program groupings making up over 60 offerings

- Computer Information Technology (CIT)
- Internet Development Technology (IDT)
- Interactive Simulation and Game Technology
- Computer Science

## 54 CIT Programs

27

Networking Security

12

Programming

9

PC Support

6

Web/Internet Services

- Certificates and Associates degrees are not parallel
- Credentials do not always transfer to a 4-year institution

EX:

# Emerging Trends

## “New Collar” Jobs

According to a 2018 CompTIA IT Industry report, “new collar” jobs call for candidates who have a skill-centered education that can address technology’s presence in other industries. However, a strong pipeline from education to middle-skill jobs is required.

Source: CompTIA, IT Industry Outlook 2018

## Increase Your Wage Potential with These Certifications

Certification	Average Annual Salary in the United States
Citrix Certified Associate – Networking (CCAN)	\$99,217
Cisco Certified Networking Professional (CCNP) Routing and Switching	\$99,402
Certified Information Systems Auditor (CISA)	\$99,684
Microsoft Certified Solutions Expert (MCSE) – Server Infrastructure	\$100,656
Citrix Certified Professional – Virtualization (CCPV)	\$103,424
Six Sigma Green Belt	\$104,099
Certified Ethical Hacker (CEH)	\$106,375
Certified ScrumMaster	\$106,938
Certified Information Security Manager (CISM)	\$108,043
Certified in Risk and Information Systems Control (CRISC)	\$111,049
Certified Information Systems Security Professional (CISSP)	\$111,475
AWS Certified Developer – Associate	\$114,148
Project Management Professional (PMP)	\$114,473
AWS Certified Solutions Architect – Associate	\$121,292
Certified in the Governance of Enterprise IT (CGEIT)	\$121,363

■ Currently offered at DCCCD

Source: Global Knowledge, 2018 IT Skills and Salary Report

## Job Roles to Watch



- Cloud Computing
- Cyber Security
- Virtualization
- Networking & Wireless LAN
- Internet of Things (IoT)
- AI, Cognitive Computing & Machine Learning
- Mobility & Endpoint Mgmt.
- Mobile App Development & Deployment
- Software Development
- Business Process Mgmt.

Source: Global Knowledge, 2018 IT Skills and Salary Report

## RECOMMENDATIONS

- Align and consolidate similar programs
- Develop degrees that are transferable to 4-year institutions
- Review programs annually to align with workforce needs
- Assemble one district-wide IT advisory council
- Identify reasons why enrollment and/or graduation rates are low in certain areas

Insure implementation of new languages like...

- Java
- Python
- JavaScript
- C++
- C#



For more information, contact the Labor Market Intelligence Center staff:

Ben Magill, Executive Director • bmagill@dcccd.edu • 214-378-1621

Daniela Ramirez, GIS Analyst • daniela.ramirez@dcccd.edu • 214-378-1743 • Tana Juko, Research Analyst • tjuko@dcccd.edu • 214-378-1841