


# Where is CS in NC CTE?

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# IT Career Cluster



Pathways	 <b>Information Technology</b> <b>Cluster Foundation Courses</b>			
	<b>Programming &amp; Software Development</b>	8811/BI10 Foundations of Information Technology (BFIT & T&I)	6421/BP10 Computer Programming I	6422/BP12 Computer Programming II *
8721/BF10 Principles of Business & Finance (BFIT & MEE)		6428/BP20 SAS Programming I * ^		6429/BP22 SAS Programming II ^
6419/BM20 Microsoft Excel and Access ^		6451/BP30 Oracle Database Programming I ^		6452/BP32 Oracle Database Programming II * ^
<b>Web &amp; Digital Communications</b>	8721/BF10 Principles of Business & Finance (BFIT & MEE)	6414/BD10 Multimedia & Webpage Design * (BFIT & T&I)	6415/BD12 e-Commerce I *	6416/BD14 e-Commerce II
	6417/BM10 Microsoft Word and PowerPoint ^			
	8811/BI10 Foundations of Information Technology (BFIT & T&I)			
<b>Information Support &amp; Services</b>	8811/BI10 Foundations of Information Technology (BFIT & T&I)	6430/BI05 IB Information Technology ^	7992/II22 Computer Engineering Technology II * (BFIT, T&I & TE)	8595/CS95 CTE Advanced Studies
	7400/IU10 Introduction to Trade and Industrial Education	7991/II21 Computer Engineering Technology I (BFIT,T&I & TE)		
	6419/BM20 Microsoft Excel and Access ^			
<b>Network Systems</b>	7400/IU10 Introduction to Trade and Industrial Education	7980/II11 Network Engineering Technology I	7981/II12 Network Engineering Technology II *	7982/II13 Network Engineering Technology III
	8811/BI10 Foundations of Information Technology (BFIT & T&I)			
	8811/BI10 Foundations of Information Technology (BFIT & T&I)	641/BN20 Network Administration	6342/BN22 Network Administration II * ^	6343/BN24 Network Administration III ^
		8510/CS11 Project Management I	8511/CS12 Project Management II – Global	8513/CS14 Project Management III
		8512/CS13 Project Management II		

# Programming and Software Development Pathway



**Pathways**

**Programming & Software Development**

8811/BI10 Foundations of Information Technology (BFIT & T&I)

8721/BF10 Principles of Business & Finance (BFIT & MEE)

6419/BM20 Microsoft Excel and Access ^

6421/BP10 Computer Programming I

6422/BP12 Computer Programming II \*

6428/BP20 SAS Programming I \* ^

6451/BP30 Oracle Database Programming I ^

2508/ AP Computer Science ^

6429/BP22 SAS Programming II ^

6452/BP32 Oracle Database Programming II \* ^

# Pathway Options

## OPTION I

- Foundations of IT
- Computer Programming I
- Computer Programming II
- AP Computer Science

## OPTION II

- Foundations of IT
- Computer Programming I
- SAS Programming I
- SAS Programming II

# Pathway Options

## OPTION III

- Foundations of IT
- CS Principles
- Computer Programming I
- Computer Programming II

## OPTION IV

- MS Excel and Access
- CS Principles
- Computer Programming I
- Computer Programming II

and more...

# NC Computer Programming Endorsement

Business, Finance and Information Technology Education Endorsement Areas	Requirements
Computer Programming XXXXXX	<p><b><u>Eligibility Requirements:</u></b> <b><u>Teaching License</u></b></p> <p>A clear or provisional or lateral entry teaching license is required in <b>Business Finance, and Information Technology Education</b> OR a license in ,Marketing Education, <b>Mathematics Education</b>, Technology Education, or Trade and Industrial education (“A” level)</p> <p style="text-align: center;">AND</p> <p>The following coursework: (15 semester hours)</p> <ul style="list-style-type: none"> <li>• Programming (two courses from the same programming language)</li> <li>• Object-oriented design</li> <li>• Data structures and algorithms</li> <li>• Computer hardware and organization</li> </ul> <p>For SAS programming, teachers must attend and complete the SAS Programming for High School training provided by SAS.</p>

# New in CTE CS Courses

## CS Principles

- Field Test 2014-2015
- Approved by SBE, September 2014
- State secure multiple choice postassessment

## Computer Programming II

- Revision for Summer 2015
- Transition from Visual Basic to C# and Java
- Reviewing Oracle Java instructional materials for use as part of the course
- Oracle Java PD will be available online
- Game and app development applications of concepts

# AP Computer Science Changes

## Hands-On Lab Requirement

- **New Computer Science A Lab Requirement for 2014-15**

To stay aligned with the most recent practices in the continually changing field of computer science, we have updated the lab requirement for Computer Science A.

[Learn more...](#)

- **No GridWorld Case Study**

## Helpful Links

- AP Central: Computer Science A Course Homepage
- [http://apcentral.collegeboard.com/apc/public/courses/teachers\\_corner/4483.html](http://apcentral.collegeboard.com/apc/public/courses/teachers_corner/4483.html)
- Join the LEARN NC Moodle PLC for AP CS



# Good News in NC Computing Education—We're Growing!

## 2012-2013

- Computer Programming I  
2,057
- Computer Programming II  
373
- Computer Science Principles  
245

## 2013-2014

- Computer Programming I  
2713—**32% Increase**
- Computer Programming II  
745—**132% Increase**
- Computer Science Principles  
326—**33% Increase**

# How can we improve?!

## Broaden Participation

- Actively recruit young women and under-represented minorities to take CS courses
- Make them feel welcome and comfortable in CS courses

## Use Available Resources

Document(s)/Link(s):

- [National Center for Women and IT](#)
- [Made with Code](#)
- [Dot Diva](#)
- [Predicted Computing Jobs Map](#)
- [Girls Excelling in Math and Science\(GEMS\)](#)
- [Award for Aspirations in Computing](#)
- [Code.org](#)

# How can we improve?!

## Student Recognition

- Award for Aspirations in Computing

<http://www.ncwit.org/programs-campaigns/aspirations-computing>

## Teacher Recognition

- Aspirations in Computing Educator Award

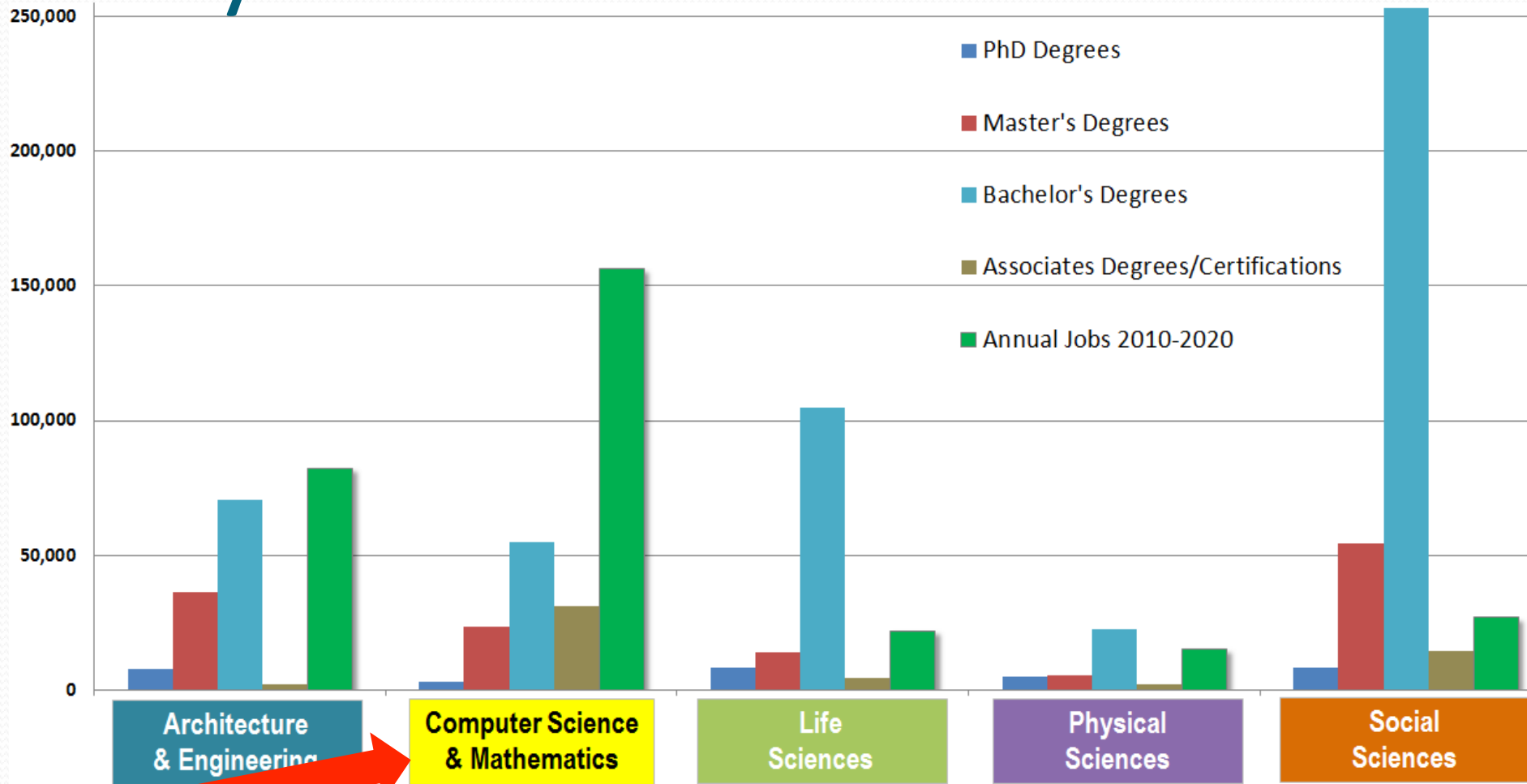
<http://www.ncwit.org/programs-campaigns/aspirations-computing>

# Actively Participate in CSTA



<http://csta.acm.org/>

# Why we do what we do...





# Contact Information

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