CSTA-Oracle Academy 2014 U.S. High School CS Survey:
The State of Computer Science in U.S. High Schools: an Administrator's Perspective

Methodology:

The Computer Science Teachers Association (CSTA), in collaboration with Oracle Academy, administered an online survey to over 20,000 Public and Private 9–12 secondary school Principals and Vice Principals in the United States between May and September of 2014. The purpose of the survey was to identify computer science education opportunities that are being provided at the high school level, determine how broadly CS is being offered in the US, and determine the different ways CS was being defined in the schools. Surveys were also sent to administrators across the United States using contact information provided by a market data company. A total of 503 people responded to the survey. The results below represent the percentages and averages for those who answered each question.

Results:

1. **School location information**

State	Number of Responses	Percent of overall responses
CA	35	.07%
PA	34	.068%
NY	31	.062%
WI	26	.052%
TX	25	.05%
MI	22	.044%
OH	20	.04%
MA	19	.038%
IN	17	.034%
IL	14	.028%
MN	14	.028%
WA	14	.028%
CO	13	.026%
KY	13	.026%
OK	13	.026%
OR	12	.024%
MD	11	.022%
NJ	11	.022%
VA	10	.02%
KS	9	.018%

AL	8	.016%
CT	8	.016%
UT	8	.016%
AR	7	.014%
AZ	7	.014%
GA	7	.014%
IA	7	.014%
LA	7	.014%
NE	7	.014%
NM	7	.014%
MT	6	.012%
NH	6	.012%
ME	5	.01%
NC	5	.01%
SC	5	.01%
SD	5	.01%
FL	4	.008%
MO	4	.008%
WV	4	.008%
DE	3	.006%
ID	3	.006%
TN	3	.006%
AK	2	.004%
MS	2	.004%
ND	2	.004%
NV	2	.004%
RI	2	.004%
DC	1	.002%
HI	0	0%
VT	0	0%
WY	0	0%

2. **OPTIONAL QUESTION: Please only provide your contact information if you wish to be eligible for the raffle.**

   N/A

3. **How many students attend your school?**

1-100	5.2%
101-250	16.6%
251-500	25.4%
501-1000	24.4%
1001-2000	23.4%

2001+   5.0%

4. **Which of the following best describes your school?**

   Rural   41.8%
   Suburban   40.4%
   Urban   17.8%

5. **How would you describe your student population?**

   Majority of the students do not qualify for free/reduced lunch   44.1%
   Majority of the students qualify for free/reduced lunch   26.9%
   About half of the students qualify for free/reduced lunch   24.6%
   None of the students qualify for free/reduced lunch   4.4%

6. **Does your school offer computer science courses?**

   Yes   77.5%
   No   22.5%

7. **Does your school offer after school or extracurricular programs in computer science?**

   No   65.5%
   Yes   34.5%

8. **Which department(s) are responsible for the computer science courses? (Check all that apply.)**

   Career and Technology Education   53.5%
   Business   42.6%
   Math   23.5%
   Computer Science   18.8%
   Science   9.7%
   Other*

9. **How many students take a computer science class each year?**

   1-10   13.6%
   11-25   13.2%
   26-50   21.3%
   51-100   19.9%
   101-150   9.6%
   151-200   10.5%
   >200   12.0%

10. **Can students count a computer science course towards a graduation credit?**

    Yes   92.0%
    No   8.0%

11. **If yes, what kind of graduation credit? (Check all that apply.)**

    Elective   72.5%
    Technology   26.5%
    Computer Science   20.5%
    Math   12.8%
    Other   7.2%
    Science   5.5%

12. **What is your preferred way to receive curriculum and other educational resources?**

    Download PPT or other files   69.2%
    Hosted/In the Cloud   32.4%
    Standards-compliant files that can be loaded into your school LMS   13.4%
    Hosted Learning Management System (such as Blackboard)   11.3%
    Other (please specify)

13. **What percentage of computer science students pursues this following path after high school?**

	2-year college	**4-year college**	**Direct to workforce**
0%	9	10	25
1-20%	113	65	66
21-40%	82	68	15
41-60%	33	53	22
61-80%	11	51	7
81-99%	1	71	2
100%	4	48	1

14. **What kinds of computer science and CTE courses do you offer (Check all that apply.)**

Course	Grade 9	Grade 10	Grade 11	Grade 12
Intro Computer Science	208	181	150	142
AP Computer Science	19	57	113	119
Communications/media	79	118	135	131
Computer Graphics	94	156	181	169

Database development	15	25	40	36
Game Development	40	54	79	79
Networking	18	28	52	49
Programming	94	140	163	164
Robotics	87	108	124	120
Web design and development	123	198	239	233
Other	51	53	58	59

15. **Please list other computer science courses not included above.**

3D animation
3D programming elective
A+ Certification
A+ Network
A+ Security
Adobe Photoshop
Advanced Computer Applications
Advanced Java concepts
Advanced Topics in Computer Science
All sophomores are required to take Intro to Computer Science. Art dept offers a computer graphics class. Business dept offers a web design class.
Android App development
Animation
Any grade can take it. Things checked are not separate courses but are covered in the classes we do offer.
App Development
App development and coding
Applied Technology (9th)
Archicad
Artificial Intelligence
Artificial Intelligence
AutoCadd
Basic computer science 7th and 8th grades
Business and Technology Foundations
Business Applications
Business Communications Info Systems Grades 9-12
Business Information Systems (BIM)
Business Management
CAD
Career Exploration
CISCO
Classes are offered with dual enrollment at the community college.
College computer class

COMPTIA
Computer Aided Drafting
Computer Applications
Computer Illustration/Animation
Computer Layout & Design
Computer Software Applications
Computer Technology
Computerized Accounting
Computers 1 and 2 at the Junior High level
Computing independent Study
Construction Technology
CS Principles
Customer Service
Cyber Forensics
Cybersecurity I & II
DA 106 college course
Design Processes 1 & 2
Designing Mobile Apps
Desktop Publishing
Digital Business Applications
Digital Citizenship
Digital Imaging
Digital Interactive Media
Digital photo and video
Digital Presentation
Document production such as Microsoft products (applications).
Drawing, Design, and Production (CAD)
Dual credit Information Technology
Engineering
Excel
Exploring Computer Science from Code.org
Fashion design
Freshman computers
General Technology class, included an intro to programming among other
technology related topics
Graphic Design
Have offered robotics and engineering club
I teach PLTW's CSE with CS Principles pilot
IB SL/HL Computer Science
IBA
Image Editing
In the middle school we teach computers to 7th and 8th graders, introducing a
variety of applications. We also offer a Tech Assistant course at the HS where
students support staff in troubleshooting all kinds of hardware and networking
issues.
Independent Study

Information Technology
Informational Technology 1 and 2
Integrated Technology
Interior design
Intermediate Computer Science
Intro to Communication Technology
Intro to Computer Programming Using ALICE
Introduction to Computers
Introduction to Technology 7th and 8th grade
IT Essentials Engineering & Design
Keyboarding
Keyboarding Grades 9-12
Linux Clusters
Microsoft Office
Microsoft Power Point, Word, and Excel
Mobile App Development
Mobile App development
Mobile App Development
Mobile App Development for Android
Mobile Applications Design and Development
Multimedia
Network management skills
Newspaper
Parallel Programming
Parallel Programming
PC Support
Personal Finance
PLTW Computer Science
PowerPoint Design and Presentation Skills
Pre-AP
Printshop
Project Lead the Way - Engineering, Electronics
Project Lead the way, Auto cad
Radio 2
Radio/TV
Robotics
Robotics are done in an after-school club
Robotics is offered as Independent Study
Robotics is set to be added next year
Robotics is taught through a club, not a course.
Science Visualization I offer Game Developers and Robotics Clubs after school
St. Michael Academy is a blended environment, combining online and real-time courses, not computer science per se, but access/knowledge.
The computer science classes students take at our high school are through a virtual school (an outside provider)
Topics in Robotics

Topics in Software Engineering
Transportation Technology
TV 2
VHS Computer
Video game programming
Video production
We are just starting in 2014-15, so I am not totally sure.
We are looking to add AP Comp Sci in the next couple of years.
We offer Computer Applications I and II
We offer PLTW engineering courses
We use points and not grades and no courses are grade-level specific.
We will be adding Project Lead the Way in Fall of 2014
We will be offering an intro to computer programming class in fall 2014 for the first time.
Web Design
Webmastery
When we had the program, we offered one class. It was a computer programming class that was actually a dual credit which meant that we used the college textbook and syllabus. I has been 4 years since it has been offered so I do not remember the textbook that was used.
Yearbook

16. **What content is covered in core academic computer science courses? (Check all that apply.)**

Problem solving	64.5%
Ethical and social issues	56.7%
Graphics	56.7%
Web development	51.1%
Searching & sorting	46.1%
Hardware	45.5%
Programming constructs	42.5%
Operating systems	40.5%
Logic	39.4%
Databases and information retrieval	39.1%
Computer security	37.4%
Data structures	35.8%
Object oriented programming	34.6%
Testing and debugging	34.4%
Networks	33.0%
Analysis of algorithms	31.8%
Robotics	31.3%
Mobile Apps	28.8%
Numerical representation	26.0%
Security	25.1%
Cloud computing	21.2%

Abstraction	20.4%
Software development life cycle	20.4%
Micro Controllers	8.4%
Other (please specify)*	3.9%

17. What content is covered in CTE courses? (Check all that apply.)

Web development	63.0%
Internet	60.3%
Graphics	57.9%
Problem solving	56.6%
Ethical and social issues	48.1%
Careers in computing	47.8%
Hardware	43.1%
Searching & sorting	40.7%
Databases & information retrieval	36.7%
Networks	35.4%
Computer security	34.7%
Programming constructs	32.3%
Testing and debugging	30.6%
Productivity software	30.0%
Logic	26.9%
Game programming	26.6%
Data structures	25.6%
Object oriented programming	21.5%
Analysis of algorithms	18.5%
Numerical representation	18.2%
Abstraction	11.8%
Micro controllers	10.4%
Other (please specify)*	5.7%

APPENDIX: Responses to "Other"

Question 16: What content is covered in core academic computer science courses? (Check all that apply.)

None
Office Programs
I don't know
Computer Concepts and Software Applications
We co-op with SWOTC in Altus, OK for several of these
Basic computer program usage such as power points and other programs like this
Cant remember what was covered
computer appliation software
does not apply
N/A
Music Production
Not Sure
We have no Core academic computer science courses
we do not offer core academic CS courses

Question 17: What content is covered in CTE courses? (Check all that apply.)

none
I don't know
AP Comp Sci Curriculum
3D printing
Computer Applications
We co-op with SWOTC in Altus, OK for several of these
Digital Interactive Multimedia
MIcrosoft Excel
these apply to our robotics club
N/A
Don't teach CTE courses
A little bit of everything is included in the A+ Cert class
Program Applications
what is CTE?
All of our Computer Science courses are delivered through our CTE Department
CTE courses not offered here
We have no courses beyond the introductory course