



**CSTA NATIONAL SECONDARY COMPUTER SCIENCE SURVEY:  
COMPARISON OF 2005, 2007 AND 2009 SURVEY RESULTS**

This document provides the comparative results for the CSTA 2005, 2007, and 2009 National Secondary Computer Science Surveys.

**Methodology:**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>Survey size</b>	14,000	13,000	14,000
<b>Respondents</b>	1047	1080	1153
<b>Response Rate</b>	7.5%	8.3%	8.2%

**Results:**

**1-a. Does your school offer any introductory (or pre-AP) Computer Science (CS) courses?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>Yes</b>	78%	73%	65%

**1-b. What type of credit is earned by the course(s)?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>CS Credit</b>	30%	24%	34%
<b>Math Credit</b>	8%	9%	10%
<b>Business Credit</b>	NA	19%	21%
<b>Elective Credit</b>	53%	43%	24%
<b>Tech Credit</b>	NA	NA	35%

**1-c. Are students required to take introductory CS?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>Yes</b>	26%	33%	44%

**1-d. How many students are enrolled in introductory CS?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>1-10</b>	13%	7%	9%
<b>11-25</b>	26%	27%	17%
<b>26-50</b>	24%	26%	23%
<b>51-100</b>	20%	22%	20%
<b>101+</b>	18%	18%	30%

**1-e. What percentage of students enrolled in introductory CS are female? (Skip if your school is single-sex.)**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>0% females</b>	NA	5%	4%
<b>1-20% females</b>	42%	35%	32%
<b>21-40% females</b>	23%	21%	17%
<b>41-60% females</b>	29%	33%	42%
<b>61-80% females</b>	3%	5%	3%
<b>81-99% females</b>	1%	1%	1%
<b>100% females</b>	NA	1%	1%

**1-f. What percentage of students enrolled in introductory CS are members of an ethnic minority?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>0% minority</b>	NA	11%	8%
<b>1-20% minority</b>	NA	53%	57%
<b>21-40% minority</b>	NA	15%	13%
<b>41-60% minority</b>	NA	7%	10%
<b>61-80% minority</b>	NA	7%	5%
<b>81-99% minority</b>	NA	5%	6%
<b>100% minority</b>	NA	2%	2%

**1-g. What content is covered in introductory CS? Check all that apply.**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
Problem solving	NA	62%	60%
Ethics & social issues	56%	55%	58%
Hardware	60%	57%	53%
Programming	68%	55%	52%
Graphics	46%	58%	49%
Computer Security	14%	38%	47%
Productivity software	NA	47%	39%
Databases	35%	41%	39%
Web Development	43%	35%	38%
Networks	21%	21%	21%
Game Programming	NA	NA	19%
Logic	11%	16%	13%
Other	27%	18%	7%

**2-a. Does your school offer AP Computer Science?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>Yes</b>	40%	32%	27%

**2-b. How many students take AP CS?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>1-10</b>	43%	45%	41%
<b>11-25</b>	33%	32%	33%
<b>26-50</b>	15%	15%	14%
<b>51-100</b>	6%	4%	7%
<b>101+</b>	3%	4%	4%

**2-c. What percentage of students enrolled in AP CS are female? (Skip if your school is single-sex.)**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>0% females</b>	NA	25%	23%
<b>1-20% females</b>	58%	48%	48%
<b>21-40% females</b>	24%	16%	15%
<b>41-60% females</b>	15%	8%	10%
<b>61-80% females</b>	1%	2%	3%
<b>81-99% females</b>	0%	<1%	1%
<b>100% females</b>	NA	1%	1%

**2-d. What percentage of students enrolled in AP CS are members of an ethnic minority?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>0% minority</b>	NA	27%	23%
<b>1-20% minority</b>	NA	39%	45%
<b>21-40% minority</b>	NA	13%	14%
<b>41-60% minority</b>	NA	10%	8%
<b>61-80% minority</b>	NA	5%	4%
<b>81-99% minority</b>	NA	4%	3%
<b>100% minority</b>	NA	3%	2%

**3-a. Does your school offer computing courses other than introductory and AP Computer Science?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>Yes</b>	NA	89%	74%

**3-b. What kinds of courses?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
Web design	NA	76%	68%
Computer graphics	NA	53%	51%
Communications	NA	43%	41%
Programming	NA	41%	39%
Networking	NA	24%	17%
Applications	NA	17%	11%
Game design	NA	0.6%	10%
Media/Arts	NA	6%	5%
Business IT	NA	NA	3%
CAD	NA	NA	2%
Certification	NA	4%	2%
Support/Repair	NA	3%	1%
Robotics	NA	0.8%	1%
Int. Bac.	NA	0.4%	0.3%

**4. Does your school have a math prerequisite for any CS course?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>Yes</b>	NA	38%	27%

**5. Have CS enrollments increased or decreased in your school over the past three (3) years?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>Increased</b>	56%	23%	23%
<b>Decreased</b>	44%	27%	22%
<b>No real change</b>	NA	50%	55%

**6-a. In your judgment, are there a significant number of qualified students who are not taking the CS course(s) that your school offers?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>Yes</b>	NA	77%	71%

6-b. Why? Please rank each reason below:

	2005 Ranking	2007 Ranking	2009 Ranking
No room in timetable	1	1	1
Elective courses less important	4	2	2
Greater interest in other subjects	2	3	3
Subject matter too difficult	3	4	4
CS is perceived to be 'geeky'	NA	7	5
Perceived as male-dominated	5	5	6
Perception of limited job opportunities	NA	6	7

7. What has been the impact of the No Child Left Behind (NCLB) legislation on your CS program?

	2005	2007	2009
Negative impact	NA	37%	31%
No impact	NA	58%	62%
Positive impact	NA	5%	6%

8. Under what department is CS offered in your school:

	2005	2007	2009
Technology	32%	NA	45%
Business	31%	NA	34%
Computing	28%	NA	22%
Math	20%	NA	13%
Science	3%	NA	2%

9-a. Does your district or state require you to teach a specific computer science course curriculum that includes specific content and outcomes?

	2005	2007	2009
Yes	41%	42%	42%

9-b. Are these requirements enforced?

	2005	2007	2009
Yes	53%	75%	66%

**10. Do you use all or part of the standard curriculum as outlined in the ACM Model Curriculum for K-12 Computer Science?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>Yes</b>	NA	19%	19%

**11. What do you perceive as the greatest challenges in teaching CS? Please rank each challenge below:**

	<b>2005 Ranking</b>	<b>2007 Ranking</b>	<b>2009 Ranking</b>
<b>Rapidly changing technology</b>	1	1	1
<b>Lack of staff support / interest</b>	7	3	2
<b>Lack of curriculum resources</b>	2	5	3
<b>Lack of hardware / software resour</b>	3	4	4
<b>Lack of student interest/enrollment</b>	4	2	5
<b>Difficult subject matter</b>	8	8	6
<b>Lack of student subject knowledge</b>	5	6	7
<b>Lack of teacher subject knowledge</b>	6	7	8

**12. What do you perceive as the greatest professional development needs? Please rank each need below:**

	<b>2005 Ranking</b>	<b>2007 Ranking</b>	<b>2009 Ranking</b>
<b>Time for training</b>	1	1	1
<b>Training cost</b>	4	3	2
<b>Training opportunities</b>	2	2	3
<b>Facilities and resources</b>	3	4	4
<b>Other</b>	5	5	5

**13. What do you believe to be the most effective methods for delivering professional development to CS teachers? Please rank each method below:**

	<b>2005 Ranking</b>	<b>2007 Ranking</b>	<b>2009 Ranking</b>
<b>Workshops / seminars</b>	1	1	1
<b>Networking with others</b>	4	2	2
<b>Online resources</b>	2	4	3
<b>Professional conferences</b>	3	3	4
<b>Computer-based tutorials</b>	NA	5	5
<b>College courses</b>	5	6	6
<b>Other</b>	6	7	7

**14-a. How many students attend your school?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>1-100 students</b>	4%	3%	5%
<b>101-250 students</b>	12%	10%	11%
<b>251-500 students</b>	22%	20%	25%
<b>501-1000 students</b>	24%	24%	27%
<b>1001-2000 students</b>	26%	32%	22%
<b>2001+ students</b>	12%	11%	10%

**14-b. What grade levels?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>Ninth</b>	NA	91%	92%
<b>Tenth</b>	NA	97%	92%
<b>Eleventh</b>	NA	99%	94%
<b>Twelfth</b>	NA	98%	95%

**15. What percentage of students at your school speak a language at home other than English?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>0% students</b>	NA	12%	12%
<b>1-20% students</b>	NA	65%	63%
<b>21-40% students</b>	NA	13%	13%
<b>41-60% students</b>	NA	5%	5%
<b>61-80% students</b>	NA	3%	4%
<b>81-100% students</b>	NA	3%	3%

**16. Which of the following best describes your school's location?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>Urban</b>	NA	41%	37%
<b>Suburban</b>	NA	39%	42%
<b>Rural</b>	NA	20%	21%

**17. How many years have you been teaching?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>1-3 years</b>	9%	9%	9%
<b>4-7 years</b>	16%	16%	18%
<b>8-14 years</b>	25%	28%	25%
<b>15+ years</b>	50%	47%	48%

**18. How many years have you been teaching CS?**

	<b>2005</b>	<b>2007</b>	<b>2009</b>
<b>0 years</b>	NA	4%	6%
<b>1-3 years</b>	21%	17%	19%
<b>4-7 years</b>	27%	21%	22%
<b>8-14 years</b>	27%	30%	30%
<b>15+ years</b>	29%	28%	24%

**19. How do you identify yourself? Please check all that apply:**

	<b>2007</b>	<b>2009</b>
Caucasian / White	91%	88%
African-American / Black	4%	5%
Asian-American / Asian	1%	2%
Hispanic	2%	3%
Native American / Indigenous	1%	2%
Other	2%	2%

**20. What is your gender?**

	<b>2007</b>	<b>2009</b>
Female	53%	55%
Male	47%	45%

**21. What is your age?**

	<b>2007</b>	<b>2009</b>
22-30 years	9%	8%
31-40 years	22%	19%
41-50	32%	33%
51-60 years	32%	33%
61+	4%	7%