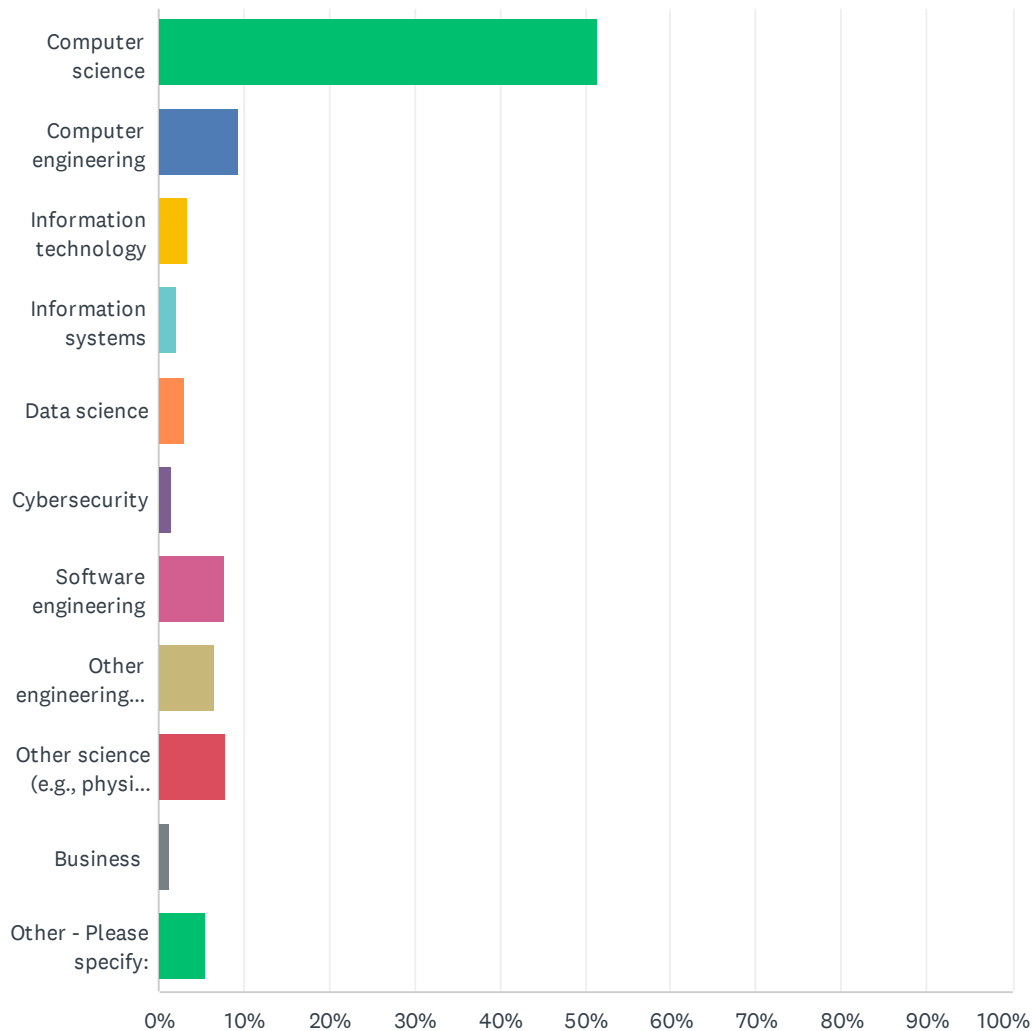


Q1 Which of the following most closely matches your own educational background (most recent degree)?

Answered: 865 Skipped: 6

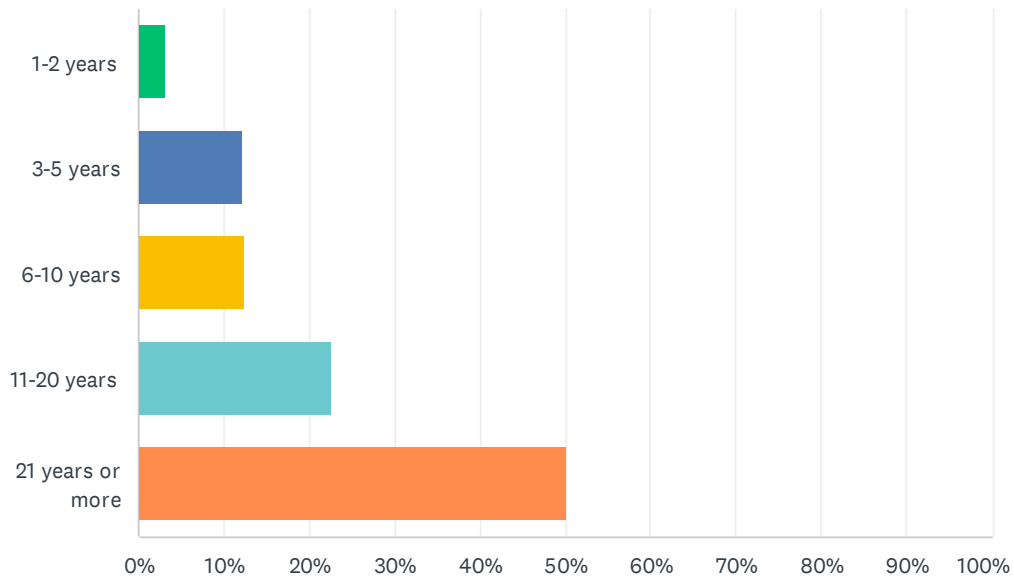


CS202X Practitioner Survey

ANSWER CHOICES	RESPONSES	
Computer science	51.45%	445
Computer engineering	9.48%	82
Information technology	3.47%	30
Information systems	2.08%	18
Data science	3.01%	26
Cybersecurity	1.39%	12
Software engineering	7.75%	67
Other engineering (e.g., mechanical, electrical)	6.71%	58
Other science (e.g., physics, math, stats)	7.86%	68
Business	1.27%	11
Other - Please specify:	5.55%	48
TOTAL		865

Q2 Years of experience in the computing/software profession:

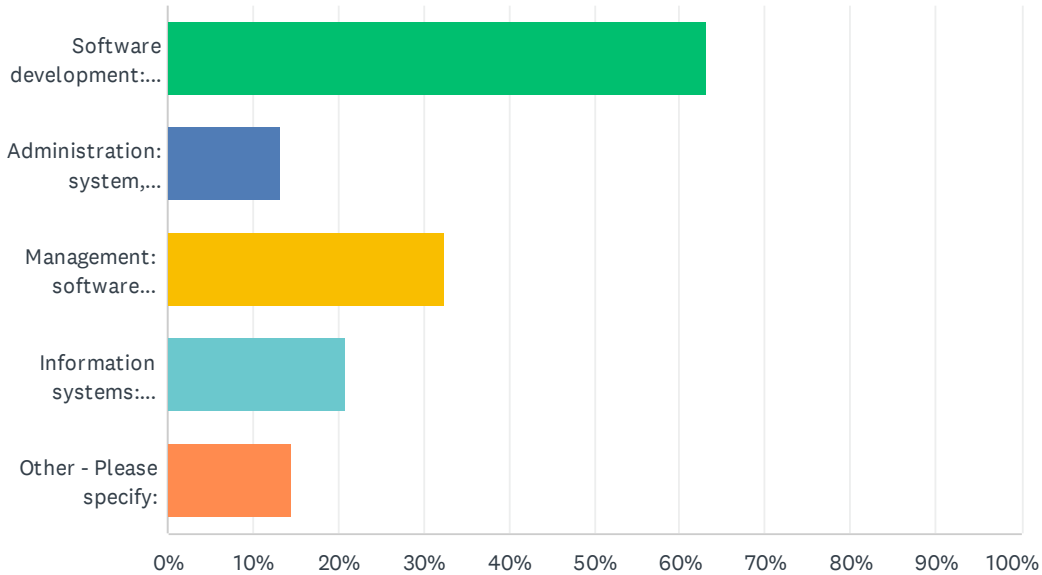
Answered: 870 Skipped: 1



ANSWER CHOICES	RESPONSES	
1-2 years	3.10%	27
3-5 years	12.07%	105
6-10 years	12.30%	107
11-20 years	22.53%	196
21 years or more	50.00%	435
TOTAL		870

Q3 Which of the following best describes the type of computing work that constitutes the majority of your work experience? Note: please check as few of the boxes as you can because we are looking for the primary descriptor.

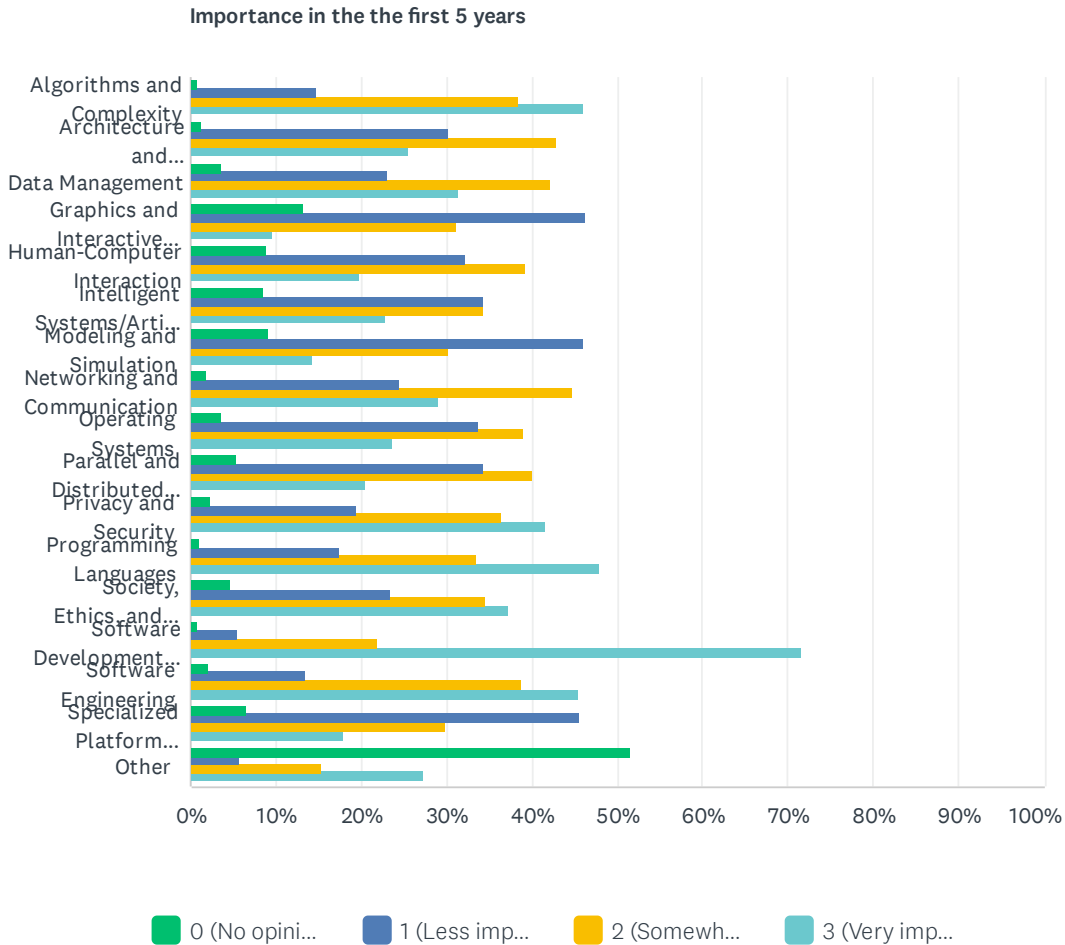
Answered: 860 Skipped: 11



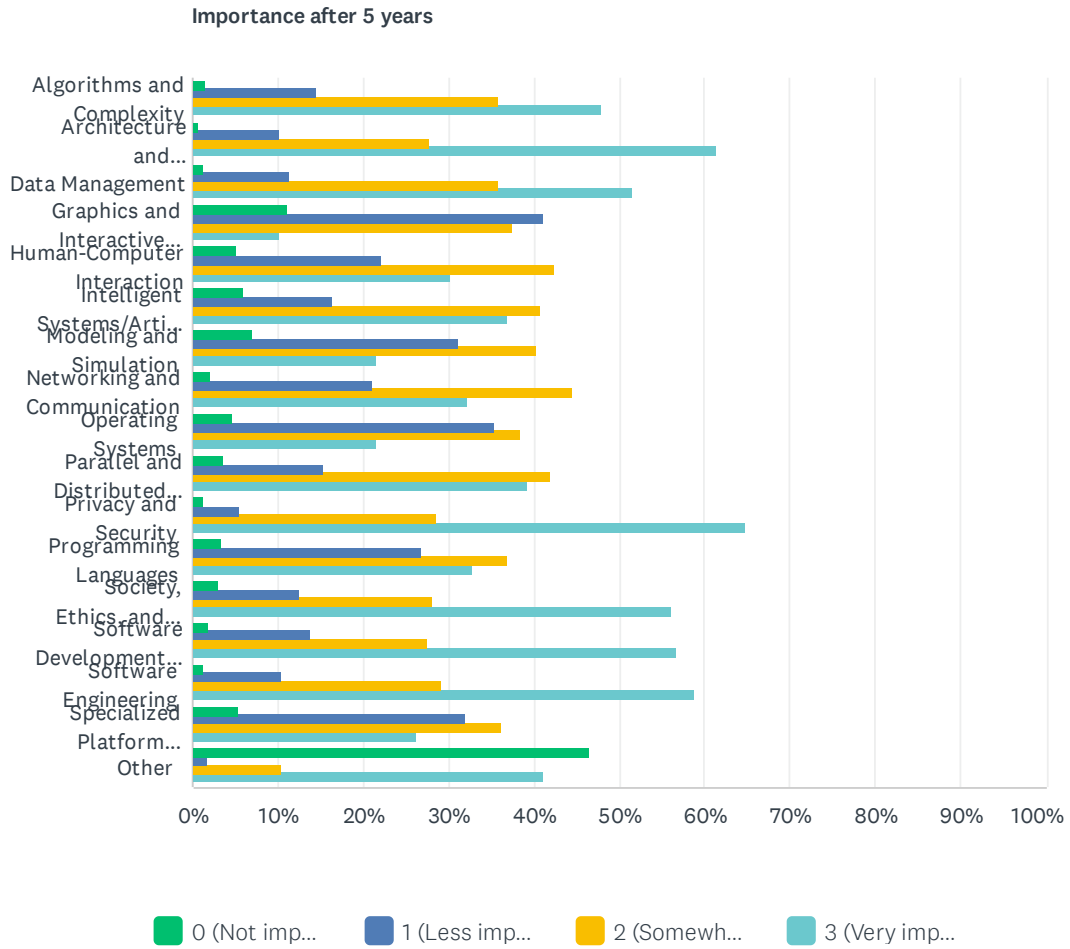
ANSWER CHOICES	RESPONSES	
Software development: full-stack, games, tools, etc.	63.02%	542
Administration: system, network, database, security	13.26%	114
Management: software engineering and processes, team management	32.33%	278
Information systems: design, administration, management	20.81%	179
Other - Please specify:	14.42%	124
Total Respondents: 860		

Q4 Computer Science graduates need to learn the knowledge and skills that they can immediately use in the workplace upon graduation. They also need to learn the knowledge and skills needed for a successful long-term career. Please rate the importance of significant coursework (not just light coverage) in each of the following areas, separately for entry-level and for the long term.

Answered: 719 Skipped: 152



CS202X Practitioner Survey



CS202X Practitioner Survey

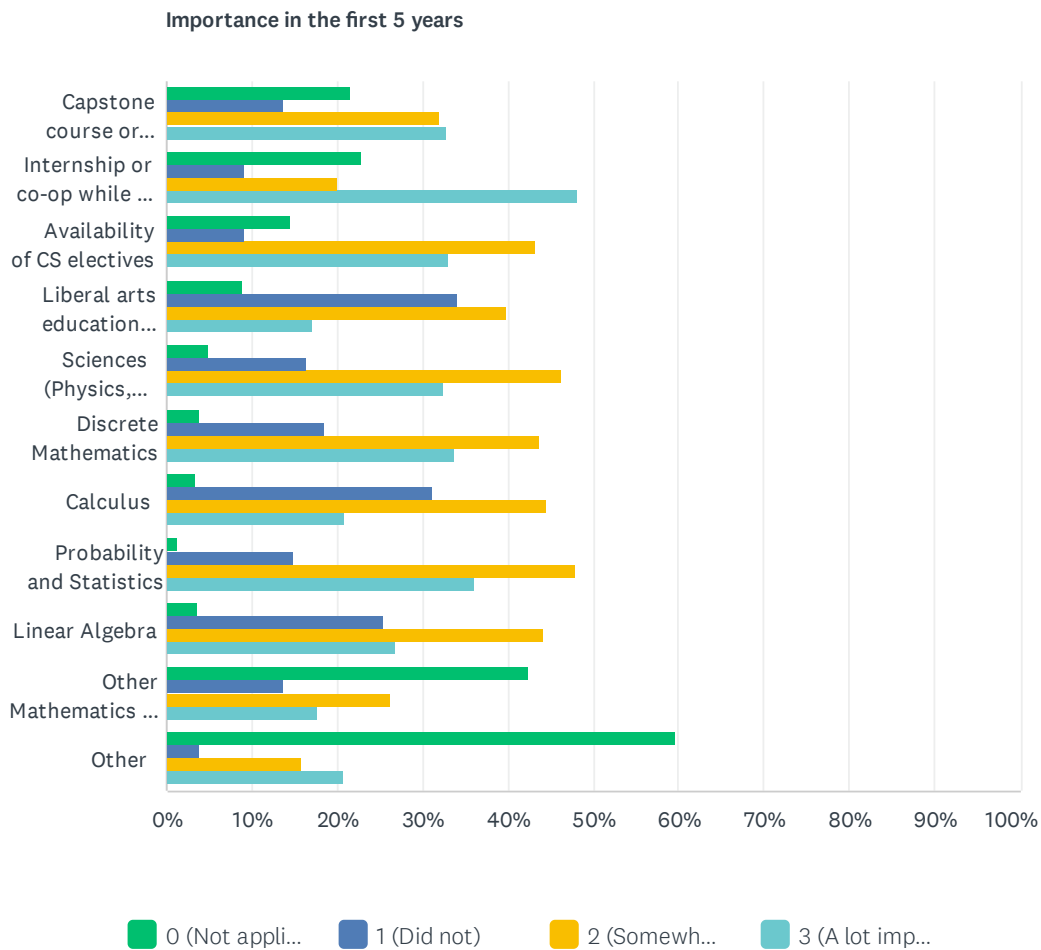
Importance in the the first 5 years					
	0 (NO OPINION)	1 (LESS IMPORTANT)	2 (SOMEWHAT IMPORTANT)	3 (VERY IMPORTANT)	TOTAL
Algorithms and Complexity	0.84% 6	14.66% 105	38.41% 275	46.09% 330	716
Architecture and Organization	1.27% 9	30.28% 215	42.96% 305	25.49% 181	710
Data Management	3.55% 25	23.01% 162	42.19% 297	31.25% 220	704
Graphics and Interactive Techniques	13.12% 92	46.22% 324	31.10% 218	9.56% 67	701
Human-Computer Interaction	8.86% 62	32.14% 225	39.14% 274	19.86% 139	700
Intelligent Systems/Artificial Intelligence	8.57% 60	34.29% 240	34.43% 241	22.71% 159	700
Modeling and Simulation	9.12% 64	46.15% 324	30.34% 213	14.39% 101	702
Networking and Communication	1.85% 13	24.43% 172	44.74% 315	28.98% 204	704
Operating Systems	3.55% 25	33.76% 238	39.01% 275	23.69% 167	705
Parallel and Distributed Computing	5.28% 37	34.24% 240	40.09% 281	20.40% 143	701
Privacy and Security	2.43% 17	19.40% 136	36.52% 256	41.65% 292	701
Programming Languages	0.99% 7	17.56% 124	33.43% 236	48.02% 339	706
Society, Ethics, and Professionalism	4.71% 33	23.40% 164	34.52% 242	37.38% 262	701
Software Development Fundamentals	0.85% 6	5.54% 39	21.88% 154	71.73% 505	704
Software Engineering	2.14% 15	13.53% 95	38.89% 273	45.44% 319	702
Specialized Platform Development (Mobile, Cloud, Web, etc.)	6.57% 46	45.57% 319	29.86% 209	18.00% 126	700
Other	51.63% 127	5.69% 14	15.45% 38	27.24% 67	246

CS202X Practitioner Survey

Importance after 5 years					
	0 (NOT IMPORTANT)	1 (LESS IMPORTANT)	2 (SOMEWHAT IMPORTANT)	3 (VERY IMPORTANT)	TOTAL
Algorithms and Complexity	1.52% 10	14.55% 96	35.91% 237	48.03% 317	660
Architecture and Organization	0.61% 4	10.30% 68	27.73% 183	61.36% 405	660
Data Management	1.37% 9	11.30% 74	35.73% 234	51.60% 338	655
Graphics and Interactive Techniques	11.06% 71	41.12% 264	37.54% 241	10.28% 66	642
Human-Computer Interaction	5.11% 33	22.14% 143	42.41% 274	30.34% 196	646
Intelligent Systems/Artificial Intelligence	5.95% 39	16.34% 107	40.76% 267	36.95% 242	655
Modeling and Simulation	7.08% 46	31.08% 202	40.31% 262	21.54% 140	650
Networking and Communication	2.14% 14	21.10% 138	44.65% 292	32.11% 210	654
Operating Systems	4.61% 30	35.48% 231	38.40% 250	21.51% 140	651
Parallel and Distributed Computing	3.52% 23	15.31% 100	41.96% 274	39.20% 256	653
Privacy and Security	1.22% 8	5.49% 36	28.51% 187	64.79% 425	656
Programming Languages	3.34% 22	26.90% 177	36.93% 243	32.83% 216	658
Society, Ethics, and Professionalism	3.04% 20	12.63% 83	28.16% 185	56.16% 369	657
Software Development Fundamentals	1.98% 13	13.85% 91	27.55% 181	56.62% 372	657
Software Engineering	1.38% 9	10.55% 69	29.20% 191	58.87% 385	654
Specialized Platform Development (Mobile, Cloud, Web, etc.)	5.37% 35	32.06% 209	36.35% 237	26.23% 171	652
Other	46.49% 106	1.75% 4	10.53% 24	41.23% 94	228

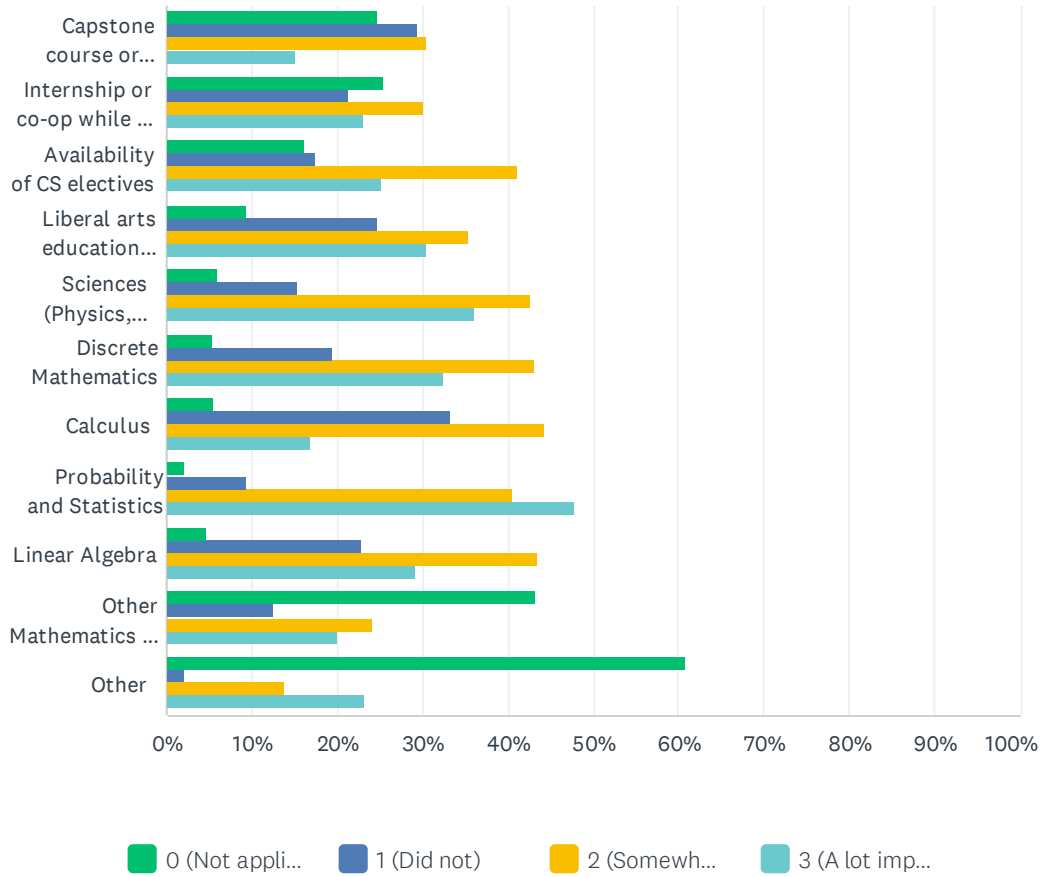
Q5 Rate how the following curricular components prepared you for your career?

Answered: 697 Skipped: 174



CS202X Practitioner Survey

Importance after 5 years



CS202X Practitioner Survey

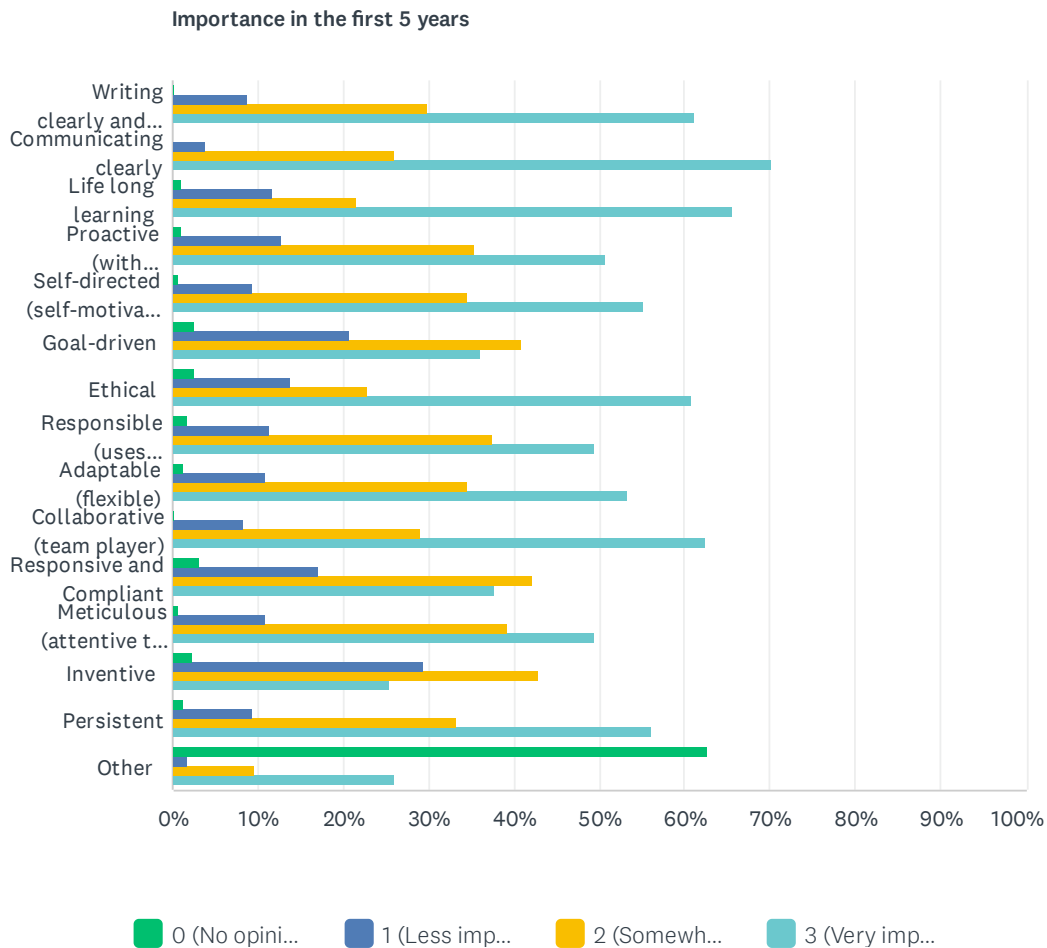
Importance in the first 5 years					
	0 (NOT APPLICABLE)	1 (DID NOT)	2 (SOMEWHAT)	3 (A LOT IMPORTANT)	TOTAL
Capstone course or senior-project	21.54% 148	13.68% 94	31.88% 219	32.90% 226	687
Internship or co-op while in college	22.75% 157	9.13% 63	20.00% 138	48.12% 332	690
Availability of CS electives	14.49% 99	9.22% 63	43.19% 295	33.09% 226	683
Liberal arts education (including courses on history, languages, literature, philosophy, creative arts, psychology and others)	8.87% 61	34.01% 234	39.97% 275	17.15% 118	688
Sciences (Physics, Chemistry, Biology, and others), scientific method, scientific inquiry	4.92% 34	16.35% 113	46.31% 320	32.42% 224	691
Discrete Mathematics	3.78% 26	18.63% 128	43.81% 301	33.77% 232	687
Calculus	3.49% 24	31.15% 214	44.54% 306	20.82% 143	687
Probability and Statistics	1.30% 9	14.86% 103	47.91% 332	35.93% 249	693
Linear Algebra	3.61% 25	25.43% 176	44.08% 305	26.88% 186	692
Other Mathematics - list them below:	42.45% 180	13.68% 58	26.18% 111	17.69% 75	424
Other	59.61% 121	3.94% 8	15.76% 32	20.69% 42	203

CS202X Practitioner Survey

Importance after 5 years					
	0 (NOT APPLICABLE)	1 (DID NOT)	2 (SOMEWHAT)	3 (A LOT IMPORTANT)	TOTAL
Capstone course or senior-project	24.66% 162	29.53% 194	30.59% 201	15.22% 100	657
Internship or co-op while in college	25.45% 168	21.36% 141	30.15% 199	23.03% 152	660
Availability of CS electives	16.15% 105	17.54% 114	41.23% 268	25.08% 163	650
Liberal arts education (including courses on history, languages, literature, philosophy, creative arts, psychology and others)	9.42% 62	24.77% 163	35.41% 233	30.40% 200	658
Sciences (Physics, Chemistry, Biology, and others), scientific method, scientific inquiry	5.90% 39	15.43% 102	42.66% 282	36.01% 238	661
Discrete Mathematics	5.32% 35	19.30% 127	43.01% 283	32.37% 213	658
Calculus	5.61% 37	33.18% 219	44.39% 293	16.82% 111	660
Probability and Statistics	2.11% 14	9.47% 63	40.60% 270	47.82% 318	665
Linear Algebra	4.68% 31	22.78% 151	43.44% 288	29.11% 193	663
Other Mathematics - list them below:	43.35% 176	12.56% 51	24.14% 98	19.95% 81	406
Other	60.85% 115	2.12% 4	13.76% 26	23.28% 44	189

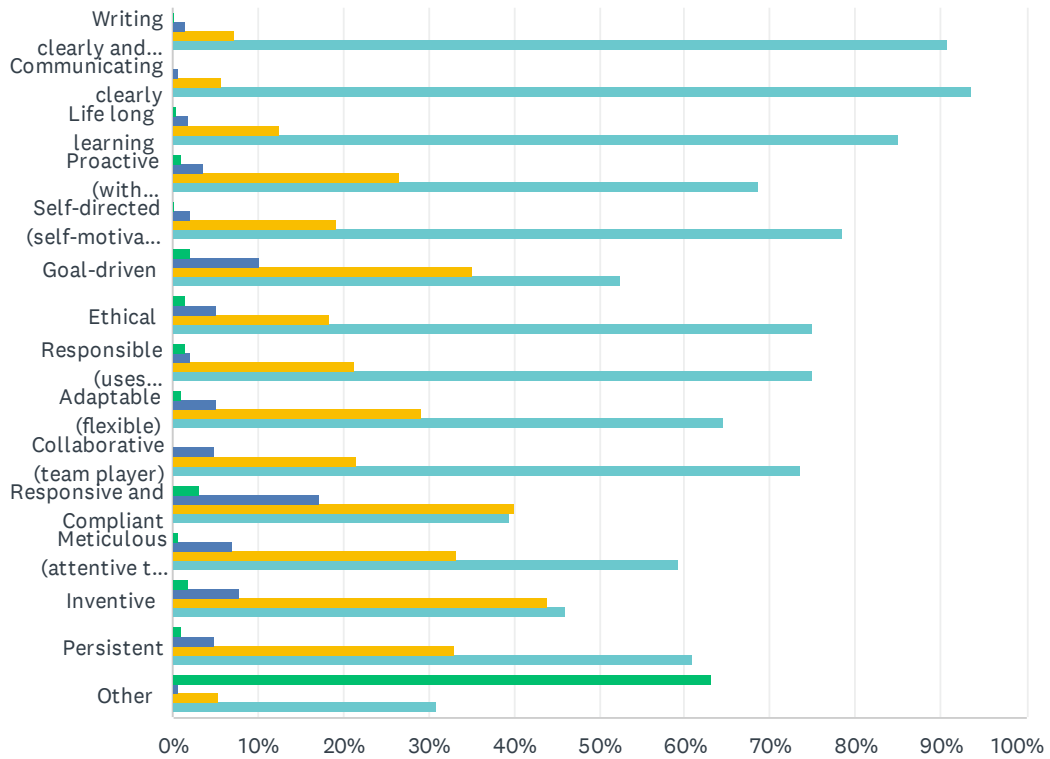
Q6 Rate the importance of each of the following skills and dispositions:

Answered: 682 Skipped: 189



CS202X Practitioner Survey

Importance after 5 years



■ 0 (No opini...
 ■ 1 (Less imp...
 ■ 2 (Somewh...
 ■ 3 (Very imp...

CS202X Practitioner Survey

Importance in the first 5 years					
	0 (NO OPINION)	1 (LESS IMPORTANT)	2 (SOMEWHAT IMPORTANT)	3 (VERY IMPORTANT)	TOTAL
Writing clearly and concisely	0.15% 1	8.84% 60	29.90% 203	61.12% 415	679
Communicating clearly	0.00% 0	3.82% 26	26.03% 177	70.15% 477	680
Life long learning	1.03% 7	11.82% 80	21.57% 146	65.58% 444	677
Proactive (with initiative, self-starter)	1.03% 7	12.85% 87	35.30% 239	50.81% 344	677
Self-directed (self-motivated, determined)	0.74% 5	9.43% 64	34.61% 235	55.23% 375	679
Goal-driven	2.51% 17	20.65% 140	40.86% 277	35.99% 244	678
Ethical	2.51% 17	13.91% 94	22.78% 154	60.80% 411	676
Responsible (uses discretion)	1.78% 12	11.28% 76	37.54% 253	49.41% 333	674
Adaptable (flexible)	1.33% 9	10.80% 73	34.62% 234	53.25% 360	676
Collaborative (team player)	0.15% 1	8.41% 57	28.91% 196	62.54% 424	678
Responsive and Compliant	3.13% 21	16.96% 114	42.26% 284	37.65% 253	672
Meticulous (attentive to detail, thorough)	0.59% 4	10.80% 73	39.20% 265	49.41% 334	676
Inventive	2.37% 16	29.44% 199	42.75% 289	25.44% 172	676
Persistent	1.33% 9	9.33% 63	33.33% 225	56.00% 378	675
Other	62.71% 111	1.69% 3	9.60% 17	25.99% 46	177

CS202X Practitioner Survey

Importance after 5 years					
	0 (NO OPINION)	1 (LESS IMPORTANT)	2 (SOMEWHAT IMPORTANT)	3 (VERY IMPORTANT)	TOTAL
Writing clearly and concisely	0.31% 2	1.54% 10	7.23% 47	90.92% 591	650
Communicating clearly	0.00% 0	0.62% 4	5.70% 37	93.68% 608	649
Life long learning	0.46% 3	1.86% 12	12.54% 81	85.14% 550	646
Proactive (with initiative, self-starter)	1.08% 7	3.55% 23	26.70% 173	68.67% 445	648
Self-directed (self-motivated, determined)	0.31% 2	2.16% 14	19.14% 124	78.40% 508	648
Goal-driven	2.16% 14	10.20% 66	35.24% 228	52.40% 339	647
Ethical	1.55% 10	5.10% 33	18.39% 119	74.96% 485	647
Responsible (uses discretion)	1.55% 10	2.17% 14	21.27% 137	75.00% 483	644
Adaptable (flexible)	1.08% 7	5.10% 33	29.21% 189	64.61% 418	647
Collaborative (team player)	0.00% 0	4.95% 32	21.48% 139	73.57% 476	647
Responsive and Compliant	3.11% 20	17.26% 111	40.12% 258	39.50% 254	643
Meticulous (attentive to detail, thorough)	0.62% 4	6.96% 45	33.23% 215	59.20% 383	647
Inventive	2.01% 13	7.87% 51	43.98% 285	46.14% 299	648
Persistent	1.08% 7	4.95% 32	32.97% 213	60.99% 394	646
Other	63.10% 106	0.60% 1	5.36% 9	30.95% 52	168

Q7 Other than what we have asked about above, what else do you believe should be covered in an undergraduate Computer Science program to prepare someone for a successful career?

Answered: 327 Skipped: 544