

April 22, 2013

TO: Cynthia Lee-Klawender, CIS Instructor

FROM: Mallory Newell, De Anza College Research  
Nergal Issaie, Student Assistant

SUBJECT: CIS Advisory Board Survey, Winter 2013

A survey was sent by faculty to students of De Anza College enrolled in the CIS courses during the Winter quarter 2013. A total of 11 students responded to the online survey.

Important highlights include:

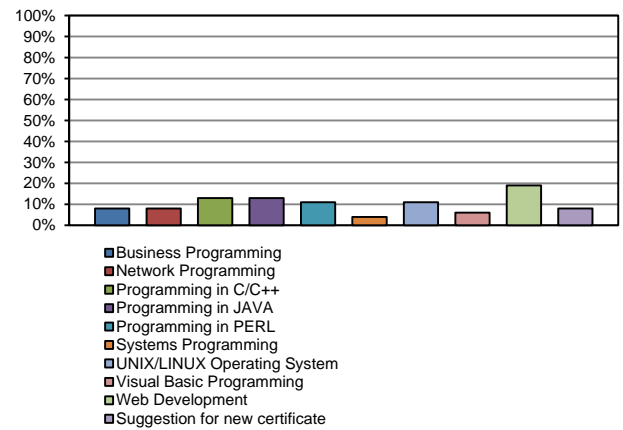
- 33% of respondents responded that they would hire applicants without any technical work experience, 33% of respondents would not hire applicants without any technical work experience, and 33% responded that it depends on some factors.
- 21% of respondents selected SQL, 13% selected each Database Tuning, Project Management, and Data intensive distributed database, 8% selected Data Warehousing, 5% selected each PL/SQL and Reporting, and 3% selected Applications in response to the question, “What kind of database skills does your company or organization look for when hiring software engineering staff?”
- 19% of respondents selected Web Development, 13% selected each Programming in C/C++ and Programming in JAVA, 11% selected each programming in PERL and UNIX/LINUX Operating System, 8% selected each Business Programming and Network Programming, 6% selected Visual Basic Programming, and 4% selected Systems Programming to be beneficial programs for the students with no Bachelor’s degree. Also, 8% selected “suggestion for new certificate.”
- 15% of respondents selected Programming in C/C++, 13% selected each Programming in JAVA and Systems Programming, 11% selected each Web Development and Business Programming, 9% selected each UNIX/LINUX Operating System and Network Programming, 5% selected programming in PERL, and 4% selected Visual Basic Programming to be beneficial programs for the students with a Bachelor’s degree. Also, 11% selected “suggestion for new certificate.”

# CIS Advisory Board Survey, Winter 2013

**\*1. Of the following current De Anza programming certificates and degrees, which could be beneficial to students with no Bachelor's degree?**  
(Select all that apply)

Response	N	%
Business Programming	4	8%
Network Programming	4	8%
Programming in C/C++	7	13%
Programming in JAVA	7	13%
Programming in PERL	6	11%
Systems Programming	2	4%
UNIX/LINUX Operating System	6	11%
Visual Basic Programming	3	6%
Web Development	10	19%
Suggestion for new certificate	4	8%
<b>Total</b>	<b>53</b>	<b>100%</b>

**1. Of the following current De Anza programming certificates and degrees, which could be beneficial to students with no Bachelor's degree?**



\* The answers were distributed across groups

## Suggestion for new certificate

Mobile Application Development

Android/iphone application development, Security related certification based on standards in tech, financial/banking, and healthcare sectors, crowdsourcing infrastructure, cloud computing and infrastructure, etc.

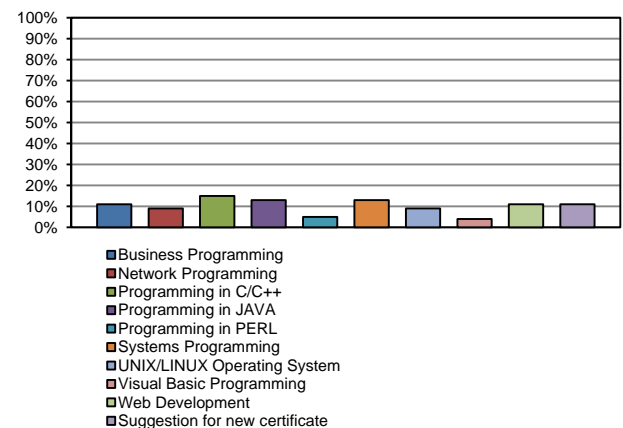
SQA, Networking QA, Mobile Programming

python, ruby on rails

**\*2. Of the following current De Anza programming certificates and degrees, which could be beneficial to students with a Bachelors degree?**  
(Select all that apply)

Response	N	%
Business Programming	6	11%
Network Programming	5	9%
Programming in C/C++	8	15%
Programming in JAVA	7	13%
Programming in PERL	3	5%
Systems Programming	7	13%
UNIX/LINUX Operating System	5	9%
Visual Basic Programming	2	4%
Web Development	6	11%
Suggestion for new certificate	6	11%
<b>Total</b>	<b>55</b>	<b>100%</b>

**2. Of the following current De Anza programming certificates and degrees, which could be beneficial to students with a Bachelors degree?**



\* The answers were distributed across groups

## CIS Advisory Board Survey, Winter 2013

### **Suggestion for new certificate**

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Mobile Application Development

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Values depend on Bachelor concentration

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Applications Design and Dev.

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Android/iphone application development, Security related certification based on standards in tech, financial/banking, and healthcare sectors, crowdsourcing infrastructure, cloud computing and infrastructure, etc.

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Big Data, Technical Product Management

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Big Data

### **3. Do you have any suggestions for updating the requirements for a Business Programming Certificate of Advanced Achievement?**

#### **Response**

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The certificate lacks a course in professional software development methodologies.

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This cert requires 10 courses where the others require only 9. Is there a certain bar for a certificate that necessitates more courses for this cert when compared to the others? Allow alternatives to VB requirement; likely Java based? Intro to current hot technologies such as databases, Map/Reduce, Hadoop, distributed systems should likely be an option, though perhaps those are at least mentioned in some of these courses.

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marketing and social media content collection and infrastructure, social media content analysis, etc.

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Requirement analysis System Design

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Visual Basic.NET? With the proliferation of web, mobile & desktop computing e.g., PHP, Cocoa, isn't VB.NET a bit dated?

### **4. Do you have any suggestions for updating the requirements for a Network Programming Certificate of Advanced Achievement?**

#### **Response**

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The certificate lacks a course in professional software development methodologies.

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Some intro to databases, Map/Reduce, Hadoop, distributed systems should likely be an option, though perhaps those are at least mentioned in some of these courses.

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Include storage devices and backup devices, NAS, SAN, de-duplication

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Just that the first header says "both of the following" instead of "the following three". The coursework seems well selected.

### **5. Do you have any suggestions for updating the requirements for a Systems Programming Certificate of Advanced Achievement?**

#### **Response**

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Some intro to databases, Map/Reduce, Hadoop, distributed systems should likely be an option, though perhaps those are at least mentioned in some of these courses.

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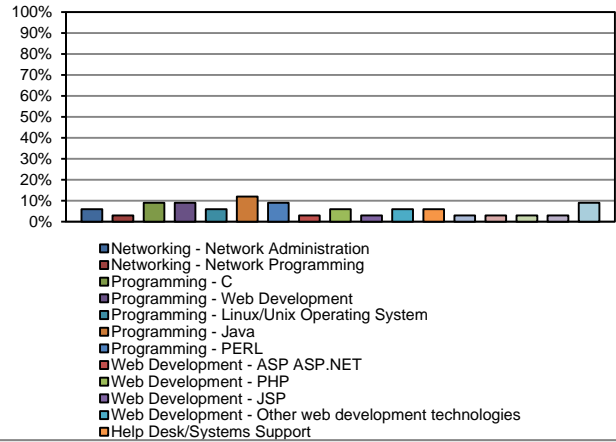
Visual C# would be good to add.

## CIS Advisory Board Survey, Winter 2013

**\*6. Does your company or organization currently have any openings for entry level positions in any of the following areas? (Select all that apply)**

Response	N	%
Networking - Network Administration	2	6%
Networking - Network Programming	1	3%
Programming - C	3	9%
Programming - Web Development	3	9%
Programming - Linux/Unix Operating System	2	6%
Programming - Java	4	12%
Programming - PERL	3	9%
Web Development - ASP ASP.NET	1	3%
Web Development - PHP	2	6%
Web Development - JSP	1	3%
Web Development - Other web development technologies	2	6%
Help Desk/Systems Support	2	6%
Windows Server Software Technical Support	1	3%
Linux Server Software support	1	3%
Security - Enterprise Security Professional	1	3%
Security - Home/Small Business Computer Security	1	3%
Other	3	9%
<b>Total</b>	<b>33</b>	<b>100%</b>

**6. Does your company or organization currently have any openings for entry level positions in any of the following areas?**



\* Only the selected options are listed.  
The answers were distributed across groups

### Other

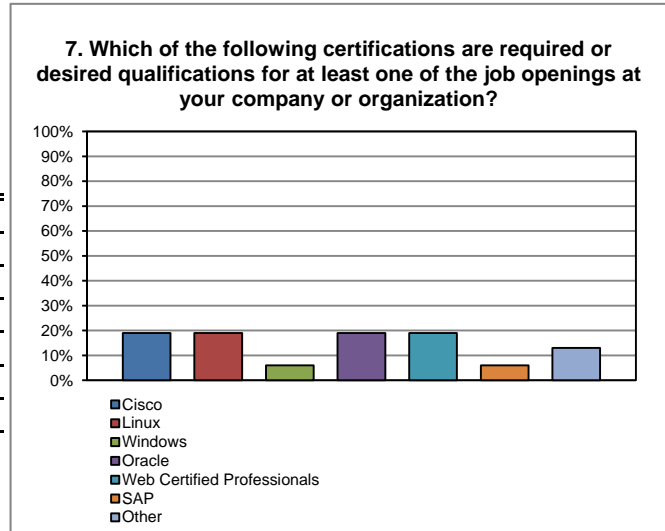
Mobile Application Development  
Big Data Processing and Analytics, Product Manager, Mobile Programming  
VMware SDK, PowerShell

## CIS Advisory Board Survey, Winter 2013

**\*7. Which of the following certifications are required or desired qualifications for at least one of the job openings at your company or organization? (Select all that apply)**

Response	N	%
Cisco	3	19%
Linux	3	19%
Windows	1	6%
Oracle	3	19%
Web Certified Professionals	3	19%
SAP	1	6%
Other	2	13%
<b>Total</b>	<b>16</b>	<b>100%</b>

\* The answers were distributed across groups



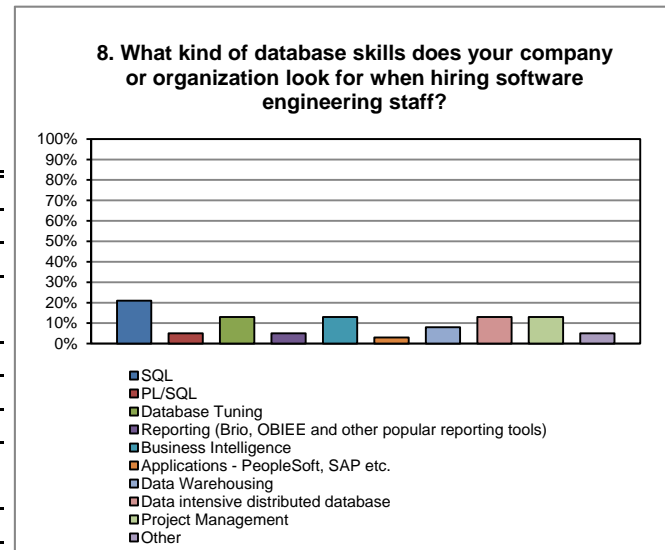
### Other

Mobile Application Development  
VMware, NetApp, Hitachi

**\*8. What kind of database skills does your company or organization look for when hiring software engineering staff? (Select all that apply)**

Response	N	%
SQL	8	21%
PL/SQL	2	5%
Database Tuning	5	13%
Reporting (Brio, OBIEE and other popular reporting tools)	2	5%
Business Intelligence	5	13%
Applications - PeopleSoft, SAP etc.	1	3%
Data Warehousing	3	8%
Data intensive distributed database - Hadoop, HBase, Hypertable, Apache	5	13%
Project Management	5	13%
Other	2	5%
<b>Total</b>	<b>38</b>	<b>100%</b>

\* The answers were distributed across groups



### Other

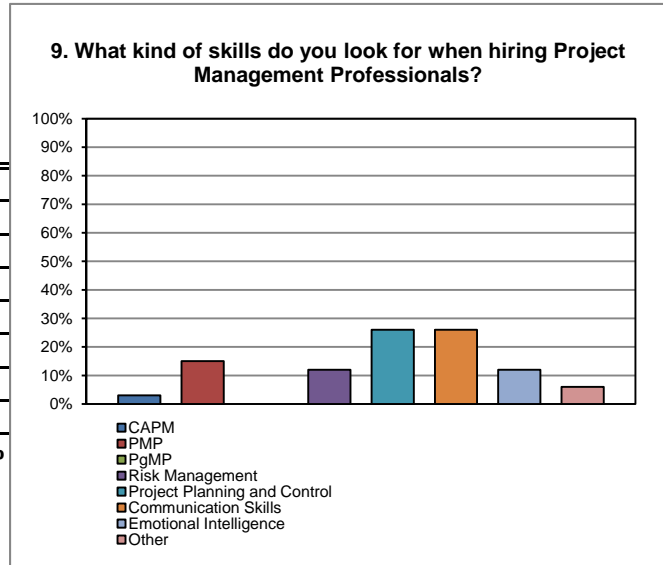
EPIC/Cache, Healthcare software EMR/EHR  
Informatica, Microstrategy

## CIS Advisory Board Survey, Winter 2013

**\*9. What kind of skills do you look for when hiring Project Management Professionals?** (Select all that apply)

Response	N	%
CAPM	1	3%
PMP	5	15%
PgMP	0	0%
Risk Management	4	12%
Project Planning and Control	9	26%
Communication Skills	9	26%
Emotional Intelligence	4	12%
Other	2	6%
<b>Total</b>	<b>34</b>	<b>100%</b>

\* The answers were distributed across groups



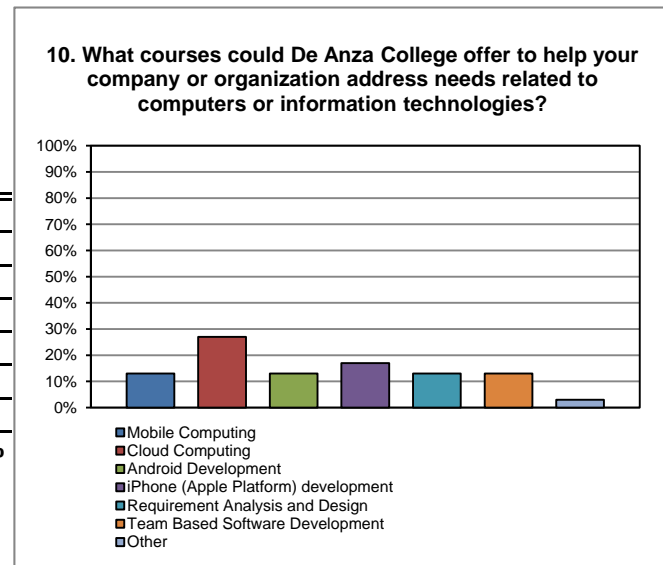
### Other

People management skills  
Domain knowledge

**\*10. What courses could De Anza College offer to help your company or organization address needs related to computers or information technologies?** (Select all that apply)

Response	N	%
Mobile Computing	4	13%
Cloud Computing	8	27%
Android Development	4	13%
iPhone (Apple Platform) development	5	17%
Requirement Analysis and Design	4	13%
Team Based Software Development	4	13%
Other	1	3%
<b>Total</b>	<b>30</b>	<b>100%</b>

\* The answers were distributed across groups



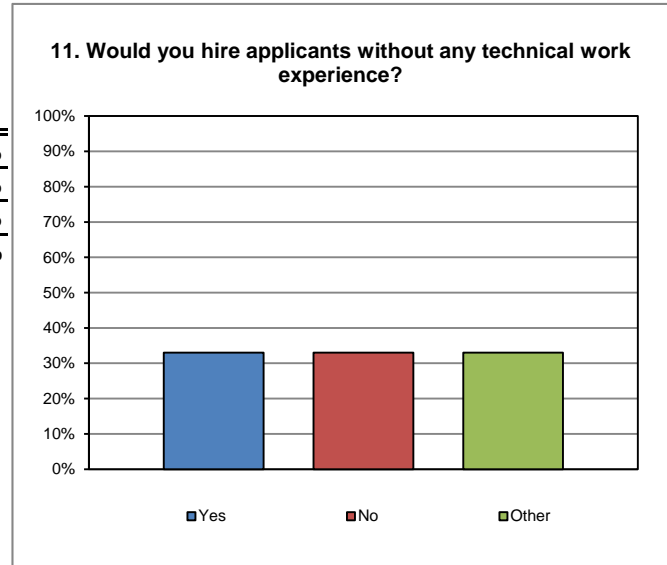
### Other

Virtualization VMware, Hyper V, Citrix, SAN Hitachi, EMC, NetApp

## CIS Advisory Board Survey, Winter 2013

### 11. Would you hire applicants without any technical work experience?

Response	N	%
Yes	3	33%
No	3	33%
It depends - please specify	3	33%
<b>Total</b>	<b>9</b>	<b>100%</b>



#### Comments

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If they are sharp coders and good communicators

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Prefer some internship, real projects

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Only entry-level, but still not likely. Even an internship would help.

### 12. In the area of Web Technology, what specific technologies would you like us to consider adding to our portfolio of courses? (Please specify)

#### Comments

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Ruby on Rails

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Ruby on Rails

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Is PHP, Ruby, etc., included?

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Crowdsourcing, Social Media marketing, Social Media Integration, Social Media content infrastructure and analysis

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PHP, Ruby on Rail, Python, HTML5/CSS3/JavaScript,

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Web services for mobile applications.



## Computer Information Systems Advisory Board - Feedback Survey

This survey is used for research purposes only. All responses will remain confidential. You may choose not to answer any questions.

Thank you for your time and support.

De Anza College

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1. Of the following current De Anza programming certificates and degrees, which could be beneficial to students with no Bachelor's degree? (Select all that apply)

- Business Programming
- Network Programming
- Programming in C/C++
- Programming in JAVA
- Programming in PERL
- Systems Programming
- UNIX/LINUX Operating System
- Visual Basic Programming
- Web Development
- Suggestion for new certificate - please specify



2. Of the following current De Anza programming certificates and degrees, which could be beneficial to students with a Bachelors degree? (Select all that apply)

- Business Programming
- Network Programming
- Programming in C/C++
- Programming in JAVA
- Programming in PERL
- Systems Programming
- UNIX/LINUX Operating System
- Visual Basic Programming
- Web Development
- Suggestion for new certificate - please specify

3. Do you have any suggestions for updating the requirements for a Business Programming Certificate of Advanced Achievement?

If yes, please provide your suggestions in the space below, the current course requirements are provided for your review:

***Business Programming - Certificate of Achievement-Advanced***

*Complete both of the following:*

- CIS 71A Beginning Programming Methodologies/C++
- CIS 71B Intermediate Programming Methodologies/C++

*Complete one (1) course from:*

- CIS 63 Systems Design
- CIS 71C Data Abstraction and Structures

*Complete all of the following courses:*

- ACCT 1A Financial Accounting I
- BUS 10 Introduction to Business
- CIS 14A Visual Basic.NET Programming I
- CIS 14B Visual Basic.NET Programming II
- CIS 64A Database Management Systems
- CIS 66 Introduction to Data Communication & Networking

*Complete one (1) course from:*

- CIS 3 Business Information Systems
- CIS 67A Local Area Networks
- CIS 86 Computer Accounting Systems



4. Do you have any suggestions for updating the requirements for a Network Programming Certificate of Advanced Achievement?

If yes, please provide your suggestions in the space below, the current course requirements are provided for your review:

***Network Programming - Certificate of Achievement-Advanced***

*Complete both of the following:*

CIS 71A Beginning Programming Methodologies/C++  
CIS 71B Intermediate Programming Methodologies/C++  
CIS 71C Data Abstraction and Structures

*Complete all of the following courses:*

CIS 18A Introduction to UNIX/LINUX  
CIS 26B Advanced C Programming  
CIS 66 Introduction to Data Communication and Networking  
CIS 75A Internet Concepts and TCP/IP Protocols  
CIS 75B Internet Programming with TCP/IP

*Complete one (1) course from the following:*

CIS 18B Advanced UNIX/LINUX  
CIS 21JA Introduction to 8086 IA32 Processor Assembly Language  
CIS 31 Operating System Concepts  
CIS 33A Programming in PERL  
CIS 67A Local Area Networks  
CIS 67B Introduction to Wide Area Networking



5. Do you have any suggestions for updating the requirements for a Systems Programming Certificate of Advanced Achievement?

If yes, please provide your suggestions in the space below, the current course requirements are provided for your review:

***Systems Programming -Certificate of Achievement-Advanced***

*Complete both of the following:*

CIS 71A Beginning Programming Methodologies/C++  
CIS 71B Intermediate Programming Methodologies/C++  
CIS 71C Data Abstraction and Structures

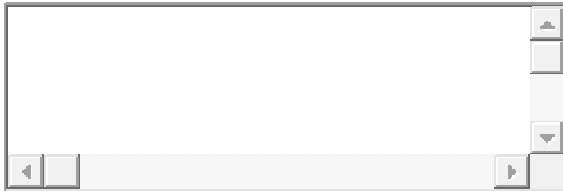
*Complete all of the following:*

CIS 18A Introduction to UNIX/LINUX  
CIS 21JA Introduction to 8086 IA32 Processor Assembly Language  
CIS 26A C as a Second Language  
CIS 26B Advanced C Programming  
CIS 31 Operating System Concepts

*Complete one (1) course from:*

CIS 18B Advanced UNIX/LINUX

CIS 28 Object Oriented Analysis and Design  
CIS 35A Introduction to Java Programming  
CIS 66 Intro to Data Communication and Networking



6. Does your company or organization currently have any openings for entry level positions in any of the following areas? (Select all that apply)

- Database Design - Database Design for Developers (Oracle)
- Database Design - Other area(s) related to database design
- Networking - Network Administration
- Networking - Network Programming
- Programming - C
- Programming - C++
- Programming - C#
- Programming - Visual Basic
- Programming - Web Development
- Programming - Linux/Unix Operating System
- Programming - Java
- Programming - PERL
- Web Development - ASP, ASP.NET
- Web Development - PHP
- Web Development - JSP
- Web Development - Other web development technologies
- Help Desk/Systems Support
- Windows Server Software Technical Support
- Linux Server Software support
- Security - Enterprise Security Professional
- Security - Computer Crime Investigation and Security
- Security - Home/Small Business Computer Security
- Other - Please specify

7. Which of the following certifications are required or desired qualifications for at least one of the job openings at your company or organization? (Select all that apply)

- Cisco
- CompTIA
- Linux
- Windows
- Oracle
- Sun
- Web Certified Professionals
- SAP
- Other - please specify

8. What kind of database skills does your company or organization look for when hiring software engineering staff? (Select all that apply)

- SQL
- PL/SQL
- Database Tuning
- Reporting (Brio, OBIEE and other popular reporting tools)
- Business Intelligence
- Applications - PeopleSoft, SAP etc.
- Data Warehousing
- Data intensive distributed database - Hadoop, HBase, Hypertable, Apache Cassandra
- Project Management
- Other - please specify

9. What kind of skills do you look for when hiring Project Management Professionals? (Select all that apply)

- CAPM
- PMP
- PgMP
- Risk Management
- Project Planning and Control
- Communication Skills
- Emotional Intelligence
- Other - please specify

10. What courses could De Anza College offer to help your company or organization address needs related to computers or information technologies? (Select all that apply)

- Mobile Computing
- Cloud Computing
- Android Development
- iPhone (Apple Platform) development
- Requirement Analysis and Design
- Team Based Software Development
- Other - please specify

11. Would you hire applicants without any technical work experience?

- Yes
- No
- It depends - please specify

12. In the area of Web Technology, what specific technologies would you like us to consider adding to our portfolio of courses? (Please specify)

Submit