ORACLE AT OCC

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Have you heard about

• Database?

• Database Administrator?

• Database analyst?

• Database Developer?

• Oracle database management system?

• Any other database management system?

• How important is database nowadays?
Oracle Academy & Oracle University

Oracle Academy (Formerly OAI):
https://academy.oracle.com/

Oracle University:
http://education.oracle.com/
Introduction

• According to the U.S. Department of Labor (http://www.bls.gov/), the Bureau of Labor Statistics generated a report in 2008 (http://www.bls.gov/oco/cg/cgs033.htm), stating that computer related jobs, for the years 2008-2018, are among the highest occupations in demand

• Computer network, Systems, and Database Administrators are among the highest in computer related jobs
Database Administration

- *Database administrators* work with database management software and determine ways to store, organize, analyze, use, and present data.

- They identify user needs and set up new computer databases.
What do Database Administrators Do?

• **Integrate** data from old systems into a new system
• **Test** and coordinate modifications to the system when needed
• **Troubleshoot** problems when they occur
• **Ensure** the **performance** of the system
• **Add** new users to the system
• **Plan** and coordinate **security** measures
What do Database Developers Do?

• Also called *database designers* or *database analysts*
• Design & implement the database
  – Create database objects (Tables, Views, Indexes, ...)
  – Fill the tables of the database with the required data
  – Build Queries to get information from the database
  – Build Constraints to enforce rules to have a consistent and non-redundant data in the database
  – Create Procedures & Functions that can be invoked by the system or the used
  – Create Triggers that are invoked by some events and that enforce some actions or rules to keep the database in tact
Certification

• Improve your **chances for employment**
• Help you **maintain adequate skill levels** throughout your career
Employment

• Database Administrators are employed in almost every major corporation and organization, including
  – Government
  – Manufacturing
  – Insurance
  – Financial institutions
  – Education
  – Internet-based organizations
    • Service providers
    • Website hosting
    • Search portals (such as Google)
Outlook

• Employment in these fields is projected to grow much faster than the average for all occupations

• **286,600 new jobs** will be added over the 2008-18 decade

• **Excellent job prospects** are expected

• According to the California Labor Market Information (**2008-2018 projection**),
  – The percent of growth of database administrators jobs is **57.3%**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Employment Number, 2008</th>
<th>Employment Percent, 2008</th>
<th>Percent Change, 2008-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database administrators</td>
<td>18.8</td>
<td>1.3</td>
<td>57.3</td>
</tr>
</tbody>
</table>
Earning

• According to the BLS Employment Statistics and California Labor Market Information (2008-2018 projection), median wages are over $70,000

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Employment</th>
<th>Mean Wages Hourly</th>
<th>Mean Wages Annual</th>
<th>Median Hourly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database administrators</td>
<td>108,080</td>
<td>35.72</td>
<td>74,290</td>
<td>34.40</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Occupation</th>
<th>Employment</th>
<th>Mean wages Hourly</th>
<th>Mean Wages Annual</th>
<th>Median Hourly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer and information scientists, research</td>
<td>26,130</td>
<td>50.66</td>
<td>105,370</td>
<td>48.83</td>
</tr>
<tr>
<td>Computer programmers</td>
<td>367,880</td>
<td>35.91</td>
<td>74,690</td>
<td>34.1</td>
</tr>
<tr>
<td>Computer software engineers, applications</td>
<td>495,500</td>
<td>43.35</td>
<td>90,170</td>
<td>42.06</td>
</tr>
<tr>
<td>Computer software engineers, systems software</td>
<td>385,200</td>
<td>46.45</td>
<td>96,620</td>
<td>44.94</td>
</tr>
<tr>
<td>Computer support specialists</td>
<td>540,560</td>
<td>22.77</td>
<td>47,360</td>
<td>21.3</td>
</tr>
<tr>
<td>Computer systems analysts</td>
<td>512,720</td>
<td>38.67</td>
<td>80,430</td>
<td>37.06</td>
</tr>
<tr>
<td>Database administrators</td>
<td>108,080</td>
<td>35.72</td>
<td>74,290</td>
<td>34.4</td>
</tr>
<tr>
<td>Network and computer systems administrators</td>
<td>338,890</td>
<td>34.1</td>
<td>70,930</td>
<td>32.55</td>
</tr>
<tr>
<td>Network systems and data communications analysts</td>
<td>226,080</td>
<td>36.81</td>
<td>76,560</td>
<td>35.22</td>
</tr>
<tr>
<td>Computer specialists, all other</td>
<td>195,890</td>
<td>37.5</td>
<td>78,010</td>
<td>37.02</td>
</tr>
</tbody>
</table>
Certification Options

• **Oracle Database Certification Program**
  – Courses are *intensive*, given usually in 5 days or less
  – Very *expensive*

• **Orange Coast College Certification Program**
  – Part of the **Oracle Academic Initiative (OAI)**
  – Courses are *hands-on*, 8 or 16 weeks
  – Very *affordable* and are offered in more details
  – The only College in central OC offering this
  – Prepares you with the *knowledge required for taking Oracle exams*, if you intend to take them
Samples of Oracle University Classes

• Source (March 6, 2011): http://education.oracle.com/
  • Education
  • Training format: Classroom
  • Browse Product Categories

• Examples of Oracle Database Certification Program (Instructor lead, 5 days)
  – Introduction to SQL: US$ 3,000
  – New Features for Administrators DBA: US$ 3,000
  – Administration Workshop II DBA: US$ 3,000
  – Performance Tuning DBA: US$ 3,000
Oracle Classes at OCC

- **Quality teaching** by professional instructors
- All classes are **hands-on with up-to-date software and computers**
- **Affordable**. Cost per unit is the same as any other class at OCC (Spring 2011 unit cost is $26.)
  - 2-Unit Class: **$52.00**
  - 3 Units class: **$78.00**
  - 4 units class: **$104.00**
- **40% voucher discounts** for Oracle University exams
- **No pre-requisites**
  - You can take more than one class at the same time
Database Certification Programs at OCC

• Two major paths:
  – Database Administration
  – Database Developer

• Brochure:

• Department's website:

• Catalog (Page 87):
OCC Database Administration Certification Classes

• Certificate of Completion
• Requirements: **15 units total**
  – Mandatory classes (11 Units)

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Discipline</th>
<th>Course Number</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro to Database Concepts</td>
<td>CIS</td>
<td>A 182</td>
<td>4</td>
</tr>
<tr>
<td>Oracle Database Admin I</td>
<td>CIS</td>
<td>A 187</td>
<td>4</td>
</tr>
<tr>
<td>Oracle Database Admin II</td>
<td>CIS</td>
<td>A 188</td>
<td>3</td>
</tr>
</tbody>
</table>

– Optional Classes
  • (Choose 4 units)

<table>
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<th>Discipline</th>
<th>Course Number</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC Concepts: Linux/Cert Prep</td>
<td>CIS</td>
<td>A 106</td>
<td>4</td>
</tr>
<tr>
<td>Oracle SQL Programming</td>
<td>CIS</td>
<td>A 183</td>
<td>4</td>
</tr>
<tr>
<td>Oracle PL/SQL Programming</td>
<td>CIS</td>
<td>A 184</td>
<td>3</td>
</tr>
<tr>
<td>SQL Tuning</td>
<td>CIS</td>
<td>A 178</td>
<td>2</td>
</tr>
<tr>
<td>PL/SQL II</td>
<td>CIS</td>
<td>A 179</td>
<td>2</td>
</tr>
</tbody>
</table>
OCC Database Developer Certification Classes

• Certificate of Completion
• Requirements: **15 units total**
  – Mandatory classes (11 Units)
    - Course Name: Intro to Database Concepts
      - Discipline: CIS
      - Course Number: A 182
      - Units: 4
    - Course Name: Oracle SQL Programming
      - Discipline: CIS
      - Course Number: A 183
      - Units: 4
    - Course Name: Oracle PL/SQL Programming
      - Discipline: CIS
      - Course Number: A 184
      - Units: 3
  – Optional Classes
    - (Choose 4 units)
      - Course Name: SQL Tuning
        - Discipline: CIS
        - Course Number: A 178
        - Units: 2
      - Course Name: PL/SQL II
        - Discipline: CIS
        - Course Number: A 179
        - Units: 2
      - Course Name: Oracle Forms & Reports Developer
        - Discipline: CIS
        - Course Number: A 185
        - Units: 4
      - Course Name: Oracle Database Admin I
        - Discipline: CIS
        - Course Number: A 187
        - Units: 4
Questions?

• Pre-requisites?
• Can classes be taken concurrently?
• How much typing is involved?
• Which semesters and time of day are classes offered?
• Does having a certificate help job opportunities?
• Can you get a job without bachelor degree and only with the Oracle certificate?
OCC Database Administration Certificate

Learning Outcomes

Students will be able to:

1. **Design** and develop a data **Model**
2. **Create, manage, backup and recover** an **Oracle** database
3. **Monitor** database **performance** using Oracle-supplied administration tools and **SQL**
OCC Database Developer Certification
Learning Outcomes

Students will be able to:

1. Design and develop a data model
2. Use SQL to retrieve data, manipulate and manage database objects
3. Create, execute and maintain PL/SQL modules
Oracle Database Certification Program

- Oracle Database 11g & 10g
  - Database Administration
  - Application Development
- Oracle Database 9i
  - Database Administration
- MySQL
- Partner Database Specializations
  - Implementation

Source:
Oracle Database Certification Links

- **Oracle Database 11g**
  - Database Administration
    - Oracle Database 11g Administrator Certified Associate
    - Oracle Database 11g Administrator Certified Professional
    - Oracle Database 11g Administrator Certified Master
    - Oracle Database 11g: Performance Tuning
    - Oracle Certified Expert, Oracle Real Application Clusters 11g and Grid Infrastructure Administrator
    - Oracle Database: SQL Certified Expert
  - Application Development
    - Oracle Application Express Developer Certified Expert
- **Oracle Database 10g**
Oracle Database Certification Links

• Oracle Database 10g
  – Database Administration
    • Oracle 10g: Managing Oracle on Linux Certified Expert
    • Oracle Database 10g Real Applications Clusters Administrator Certified Expert
    • Oracle Database: SQL Certified Expert
    • Oracle Database 10g Administrator Certified Associate
    • Oracle Database 10g Administrator Certified Professional
    • Oracle Database 10g Administrator Certified Master
  – Application Development
    • Oracle Application Express Developer Certified Expert
Oracle Database Certification Links

• **Oracle Database 9i**
  – Database Administration
    • [Oracle9i Database Administrator Certified Associate](#)
    • [Oracle9i Database Administrator Certified Professional](#)
Oracle Database Certification Links

• MySQL
  – Oracle Certified Associate, MySQL 5.0/5.1/5.5
  – Oracle Certified Professional, MySQL 5.0 Developer
  – Oracle Certified Professional, MySQL 5.0 Database Administrator
  – Oracle Certified Expert, MySQL 5.1 Cluster Database Administrator
Oracle Database Certification Links

• Partner Database Specializations
  – Implementation

  • Oracle Database 11g Certified Implementation Specialist
  • Oracle Database 11g Security Certified Implementation Specialist
  • Data Warehousing 11g Certified Implementation Specialist
  • Oracle Exadata 11g Certified Implementation Specialist
  • Oracle Enterprise Manager 11g Certified Implementation Specialist
  • Oracle Enterprise Manager Application Quality Management 11g Certified Implementation Specialist