

□ **1. COURSE INFORMATION:**

- **Quarter-Year:** Spring 2015
- **Name:** Introduction to Big Data and Analytics
- **Course-Section-CRN:** CIS 64F - 61Y - 43276
- **Days and Time:** Tuesdays (6:00 pm – 8:50 pm)

□ **2. COURSE REQUIREMENTS:**

- **Requisites:** Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
- **Course Description:** Introduction to Big Data, management of unstructured and structured data and design of large-scale database systems. Concepts covered include Map Reduce parallel processing algorithms, Real-time analytics and Predictive analytics, attributes of Big Data and related issues. Introduction to large-scale file systems and parallel processing algorithms.
- **Textbooks:**
  - 1) *Big Data and Business Analytics*, Jay Liebowitz, DSc, CRC Press, ©2013
  - 2) *Data Mining: Concepts and Techniques*, Third Edition (The Morgan Kaufmann Series in Data Management Systems), by Jiawei Han, Micheline Kamber and Jian Pei, © 2011
- **Student Learning Outcomes:**

Design, implement and debug a large-scale database system using technology like Hadoop or Cassandra.

  - 1) Explore Big Data technologies as means to solving key business analytical problems.
  - 2) Interpret and analyze techniques for setting up patterns for data analysis.
  - 3) Compare and contrast the data and relation algorithms.
  - 4) Examine data preprocessing and visualization techniques for enabling data analytic scenarios.
  - 5) Articulate the characteristics of regression, forecasting and classification techniques for predictive analytics.
  - 6) Interpret and analyze architecture of database clustering technologies.

□ **3. INSTRUCTOR INFORMATION:**

- **Name:** Mounjed Moussalem
- **District email:** [moussalemmounjed@fhda.edu](mailto:moussalemmounjed@fhda.edu)

□ **4. ATTENDANCE REQUIREMENTS**

Attendance is mandatory. The exams are based on class lectures and the techniques you have used on the related programming assignments, so any absence is a disadvantage. Please refer to the syllabus for further details.

□ **5. GRADING CRITERIA**

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| Exams (60%):       | Midterm Exam at the end of the 6 <sup>th</sup> week (30%)<br>Final Exam at the end of the Quarter (30%)<br>Tuesday, June 23 at 6:15 p.m. – 8:15 p.m. |
| Assignments (40%): | 8 Assignments (8x5% = 40%)   |

□ **Important Dates:**

For a complete reference of all withdrawal dates and deadlines, refer to the De Anza College registration page at the college web site here:

<http://www.deanza.edu/calendar/springdates.html>

To continue in this class, you must participate weekly in all areas: assignments, exams and discussion.