

## CS335-e-commerce development

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## E-Commerce Development – CS335

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## **Course Description**

In the current technologically driven consumer market, e-commerce (EC) is experiencing an exponential growth rate worldwide. The business-to-consumer (B2C) e-commerce revenue increased by 20.1% from 2011 and reached \$1.500 trillion in 2014. It is expected to reach \$3.5 trillion by 2017. Just in North America alone, EC activities will account for \$900 billion in 2017 from \$340 billion in 2012. That is over 100% increase within a two-year time-frame.

This monumental growth has created a very demanding silo within Computer Science. This course is dedicated to the principals of e-commerce development technologies, methods and models as well as illustrations of the overall e-commerce framework. The course will be offered, for the first time, by Sukhen Dey, PhD, Associate Professor of Computer Science during Spring of 2017.

The course deals with the origin, history and current state of e-commerce consumerism along with programming techniques pertaining to the development of a data-driven e-commerce site. The course content, practices and instructions will expose students to various software models along with a combination of languages and database architecture, applicable to EC. The topics include, but not limited to:

- PHP, Python, CSS, HTML 5, and Jscript programming.
- Responsive Web Design.
- MySQL database.
- Customer registration.
- Authentication.
- Shopping Carts.
- PayPal for processing payments.
- Tracking customer orders from purchase initiation to delivery of goods and services.
- Crafting Classes and Objects related to the EC development paradigm.

The course specifically uses a class and object models for database design (OODB), SQL and embedded Business Intelligence logistics within E-commerce and M-commerce development platforms. **Based on the complexity associated with developing an E-Commerce site, the course will apply team building and a collaborative development pedagogy.** 

## Course Objectives

By the end of this course students should be able to:

- Articulate a clear understanding of E-Commerce technology and its current growth rate.
- Understand and demonstrate the development syntax and logic to craft an E-commerce site using languages such as PHP, Python, JavaScript, CSS.
- Understand and demonstrate the architecture of E-Commerce database and the development techniques of MySQL (Oracle) virtual RDBMS.
- Apply simple SQL queries to extract product and price information along with populating and pricing mechanism of shopping carts.
- Define the concept of *Business Intelligence* in E-Commerce.
- Program a help system or compose a *User Manual* for a live project.

As an example, the following pages show screen shots of a live e-commerce project developed under the supervision of Professor Dey in other institutions.









