Capital University of Economics and Business
Overseas Chinese College
Course Syllabus

Year and Semester	2018 Fall (September 4, 2018 - January 13, 2019)
Course Name	Based on the big data of Hadoop platform
Course Code	FISC315

Course Type

☐ General Education (Required) ☐ General Education (Elective)

☐ Professional Course (Required) ☑ Professional Course (Elective)

☐ Basic Disciplinary Course

Course Credits	4
Course Hours	40
Prerequisites	Linux Systems
Instructor	Yunhe Zhang
Grade/Section	2015FISC/Y01
Course Time/Place	F: 8:00—17:30 / B212 (week7-11)

Textbook
Building a big Data platform

Reference Book
Fundamentals of Virtualization

Big Data Platform Analytics

Hadoop Basics

Course Description
– Mastering the use of the Linux operating system – Mastering the Hadoop stand-alone configuration

– Mastering Hadoop cluster configuration

– Master HBase Database

– Mastering the Hive Data Warehouse

– Mastering the M/R algorithm

– Mastering Data analysis methods

Student Learning Objectives
Through the course of learning, students can be big Data environment configuration, big Data platform under the database, the use of data Warehouse, can carry out massive data storage and massive data analysis.

Website Source

Teaching Methods
This course consists of lectures, discussions, and hands-on projects. Students must be prepared to discuss the assigned chapters during class.

Grade Criterion

Component	Weight	Description
Final Exam	40%	A cumulative final examination will be given based on all of the contents of the class. The exam paper may be composed of multiple-choice questions, short answer questions, essay questions, problems, and preparation of financial statements. Students should rely primarily on homework assignments to give them a sense of what they may see for material on exams.
Homework	15%	Most of the assigned homework is taken from the Exercises in the textbook. Assignments will be collected at the clearly stated date. Late assignments will not be accepted. The graded assignments will be kept by the tutor for reference and won't be returned to students.
Quizzes	15%	There will be at least 2 quizzes during the semester. Quizzes may or may not be announced in advance. It may also be used as a way to check the attendance. Quizzes will test your knowledge of both concepts and the application of those concepts.
Presentation	10%	The students will be divided into several groups to prepare a presentation. Each student is required to be involved in the presentation. The topics can be selected from the textbook or lectures. Each group need to finish a PPT related to the topic which is given and hand in the related resources to the teacher before the presentation.
Participation	10%	Individuals will be asked to participate individually in a question and answer at least 5 times during the semester. The performances should be counted in their participation.
Attendance	10%	Refer to attendance policy listed below
Total	100%	

Detailed Grade Computation

	Final
Attendance	10%
Participation	10%
Homework	15%
Quizzes	15%
Presentation	10%
Final exam	40%
Total	100%

Grading Policy

A+ 97-100   A 93-96   A- 90–92   B+ 87-89   B 83-86   B- 80–82

C+ 75-79   C 70-74   C- 67–69   D+ 63–66   D 62-60   F 0- 59

Exam Schedule

Final Exam: November 23, 2018

Assessment of Student Performance

☞ *Self-Study and Reading ability Practice*

Instructor will give out the chapters or the reference books to read and use class hours to have discussion; students should be able to show a proactive attitude and ability for self-study and reading. Knowledge and oral English will be elements of homework or presentation score.

☞ *Homework*

Students should finish their homework by themselves. Copying from others will be treated as cheating and the homework scores will be lowered. Students should hand in all assignments on time. Late assignments will be accepted at the discretion of the instructor (i.e., when the student was ill or had an excused absence). Late assignments without reasonable proof will be reduced in score by 50%.

☞ *Attendance*

Because the course covers a great deal of material, attending every class session is very important for performing well.

- Being late for 15 minutes or more is considered an absence.
- Five hours or above of unexcused absences will result in the lower level of the final grade by one grade band (e.g. from C – to D +). Any excused absence must be discussed directly with the teacher.
- Absence which is more than 1/3 of the total teaching hours will cause an F (a failing grade) directly. but students are welcome to continue attending classes.
- An incomplete grade (I) will be considered in case of medical or family emergencies.

☞ *Participation*

- Students should participate in classes actively. Half of participation grade is determined by their presentation in class. They are encouraged to ask questions relevant to the subject and express their own opinions. Every student should respect the ideas, opinions, and questions of their classmates.
- Students should also use office hours to ask questions or talk with the instructor for good communication and effective learning.
- Frequent visiting the instructor and chatting in English during office hours is highly recommended.
- Any misbehavior and non-class related activities in class will result in the lower level of the participation grade, including ringing cell phones.
- All above behaviors will be solely evaluated by the instructor for scoring.

☞ *Textbook*

Students must bring the textbook to class.

Topical Course Outline

Week	Date	Topics	Homework
7	1019	— Big Data Foundation — Linux operations — Virtualization of — Configuring the Linux system Environment — Configuring the Linux network environment	——
8	1026	— Features features of Hadoop	——

		— Hadoop architecture — Installing the Hadoop Readiness Environment — Single-Machine installation Hadoop	
9	1102	— Hdfs — M/R algorithm — Hadoop cluster Installation configuration — Hadoop Cluster Application	———
10	1109	— Distributed database — HBase Installation — HBase Configuration — HBase applications	———
11	1116	— Data Warehouse — Hive Installation — Hive Configuration — Hive Application — Big Data integrated applications	———

Note: Some chapters or sections may leave for self-study, this is the students' duty to learn and understand, they may also be included in the quizzes or exams.

A review in Chinese may be held during L.C. and O.H. in the semester.

Teacher's Office Hour

• The instructor's office hour is shown in the front of the office door.

• Students are suggested to use the instructor's office hour and learning center to ask questions or talk with the instructor once at least per week for good communication and effective learning, which is recorded in the students' participation.

• The time can be scheduled by instructors or students, or both.

Cheating and Plagiarism

Cheating is not tolerated. Any student caught cheating on a quiz; test or exam will be given a mark of zero (0) for the particular work. At the beginning of the semester the definition of plagiarism will be carefully explained, when any thoughts or writings of another person are used, they must be clearly identified (usually one uses quotation marks) and the source notes. **If any student is caught cheating on any homework assignment, the highest score the student can earn in that course is a "C".**

Important Dates

Fall Semester, 2018	August 31, 2018— January 13, 2019
Aug. 31	Registration
Sep.3	Classes Begin
Sep.7 - 20	Freshmen's Military Training
Sep.24	Classes Begin （Freshmen）
Sep.24	Mid-Autumn Festival (tentative)
Oct.1 - 5	National Day Holiday (tentative)
Oct. 29 - Nov. 2	Mid-term Test
Jan.1, 2019	New Year's Day Holiday (tentative)
Jan.2-11	Final Exam Period
Jan.14	Winter Vacation Begins

Note: *This syllabus is tentative and may be changed or modified throughout the semester. All students will be notified and a new syllabus will be given.*

Instructor: <u>Yunhe Zhang</u>   **Department Head:** <u>Jingning Li</u>

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