Course Title	CLOUD COMPUTING	Instructor	CHEN, SHIH-HSIN
Course Class	TEIBM1A MASTER'S PROGRAM, DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION ENGINEERING (ENGLISH-TAUGHT PROGRAM),	Details	◆ General Course ◆ Selective ◆ One Semester
Relevance to SDGs	1A SDG9 Industry, Innovation, and Infrastructure		

Departmental Aim of Education

Ⅰ. Cultivate the ability to conduct independent research and problem solving.

Ⅱ. Strengthen creativity and research capacity.

Ⅲ. Build profound professional knowledge in computer science and information engineering.

Ⅳ. Engage in self-directed lifelong learning.

Subject Departmental core competences

B. Independent innovative thinking ability.(ratio:30.00)

D. Research & development (R&D) ability in information engineering.(ratio:70.00)

Subject Schoolwide essential virtues

2. Information literacy. (ratio:80.00)

3. A vision for the future. (ratio:20.00)

Course Introduction	This course mainly explains the three major categories of cloud, including IaaS, PaaS, and SaaS, supplemented by the new cloud architecture. We discover how to use cloud computing during the development process, and study how to accelerate the speed of research, which can be applied after graduation at work. This course will employ the products/services of Amazon Web Services and Google Cloud Platform.

The correspondences between the course's instructional objectives and the cognitive, affective, and psychomotor objectives.

Differentiate the various objective methods among the cognitive, affective and psychomotor domains of the course's instructional objectives.

Ⅰ. Cognitive : Emphasis upon the study of various kinds of knowledge in the cognition of the course's veracity, conception, procedures, outcomes, etc.

Ⅱ. Affective : Emphasis upon the study of various kinds of knowledge in the course's appeal, morals, attitude, conviction, values, etc.

Ⅲ. Psychomotor: Emphasis upon the study of the course's physical activity and technical manipulation.

No.	Teaching Objectives	objective methods
1	Familiar with one fundamental framework of cloud computing.	Cognitive

The correspondences of teaching objectives : core competences, essential virtues, teaching methods, and assessment

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	BD	23	Lecture, Practicum	Testing, Study Assignments, Report(including oral and written)

Course Schedule

Week	Date	Course Contents	Note
1	110/09/22 ~ 110/09/28	Course instructions	
2	110/09/29 ~ 110/10/05	IaaS: Infrastructure as a service (Amazon AWS EC2: Windows and Linux VMs)	
3	110/10/06 ~ 110/10/12	Infrastructure as a service (Google Computing Engine: Create VMs with a deep learning AMI and GPU should be in payment mode)	
4	110/10/13 ~ 110/10/19	Personal web development	
5	110/10/20 ~ 110/10/26	PaaS: Platform as a service (Google App Engine for Java)	
6	110/10/27 ~ 110/11/02	SaaS: Software as a Service (Dropbox, Google Data Studio) Extra: VMware Horizon, AWS Cloud9	
7	110/11/03 ~ 110/11/09	AWS Elastic Container Service and Google Kubernetes Engine	
8	110/11/10 ~ 110/11/16	Serverless: AWS Lambda	
9	110/11/17 ~ 110/11/23	Midterm report	
10	110/11/24 ~ 110/11/30	TWCC AI platform	

11	110/12/01～110/12/07	Cloud Computing and Big Data	
12	110/12/08～110/12/14	AWS Machine Learning (Sagemaker) 1	
13	110/12/15～110/12/21	AWS Machine Learning (Sagemaker) 2	
14	110/12/22～110/12/28	AWS RDS	
15	110/12/29～111/01/04	Google Cloud SQL	
16	111/01/05～111/01/11	期末報告提案與實作	
17	111/01/12～111/01/18	期末報告	
18	111/01/19～111/01/25		

Requirement	程式設計能力如Java、Python
Teaching Facility	Computer
Textbooks and Teaching Materials	AWS academics https://www.awsacademy.com/academyhome
References	
Number of Assignment(s)	**6** (Filled in by assignment instructor only)
Grading Policy	◆ Attendance： 10.0 % ◆ Mark of Usual：20.0 % ◆ Midterm Exam： 35.0 % ◆ Final Exam： 35.0 % ◆ Other〈 〉： %
Note	This syllabus may be uploaded at the website of Course Syllabus Management System at http://info.ais.tku.edu.tw/csp or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at http://www.acad.tku.edu.tw/CS/main.php . ※ **Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.**