



## 1. General Information

Course Subject	IIMT
Course Number	3689
Course Title	Cloud Computing: Essential and Application in Entrepreneurship
Academic Years	2023-2024
Grading Method	Letter

## 2. Instructors

Professor Chan, Ping Hung  
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Subclasses: 1A

## 4. Course Description

Course Description	<p>This pioneering course is delivered via a collaboration between academics and the industry. The training partner is professional Alibaba Cloud trainer. Participating students will be eligible to take part and be certificated at the industry-recognized cloud computing certification.</p> <p>This course introduces students to the use of information technology with special emphasis on the core concepts of entrepreneurship. Students will learn the relevant basic cloud computing technique and study the key processes, challenges, risks and rewards in entre- and intra-preneurial business. They will also learn to apply the concepts and knowledge acquired in the course to develop a digital business project that could be presented to key stakeholders which incl. potential investors. Students will be learning from real-life examples in this specific industry of technology.</p>
Free Elective	Yes

## 5. Course Objectives

1. Students to learn about the characteristics of technology entrepreneurship – how it helps their works on innovation in science and technology.
2. Students to learn, hands-on, from industry expert on the relevant knowledge, skillset and technique on cloud computing.
3. Students to understand the relationship between IT and entrepreneurship.
4. To equip students with the capabilities to make their venture proposal with prototype practical and feasible, as well as the management skills for a sustainable IT-based business.
5. Students to learn about the fundamental in understanding the market, commercialization and technology transfer, considering the key stakeholders and users.
6. Students to learn from local and international cases, and the trend and performance of technology start-ups and enterprises.

6. Faculty Learning Goals
Goal 1: Acquisition and internalization of knowledge of the programme discipline
Goal 2: Application and integration of knowledge
Goal 3: Inculcating professionalism
Goal 4: Developing global outlook
Goal 5: Mastering communication skills
Goal 6: Cultivating leadership

7. Course Learning Outcomes						
Course Teaching and Learning Activities	Aligned Faculty Learning Goals					
	1	2	3	4	5	6
CLO1. Describe the fundamental concepts and principles in technology entrepreneurship per Course Objectives.	✓			✓		
CLO2. Present project specifics lucidly.					✓	
CLO3. Apply the entrepreneurship skills		✓	✓	✓	✓	✓
CLO4. Demonstrate understanding of cloud computing		✓	✓			
CLO5. Formulate the action plan relating to new project or venture establishment		✓	✓	✓	✓	✓

8. Course Teaching and Learning Activities		
Course Teaching and Learning Activities #	Expected Study Hours	Study Load (% of study)
T&L1. Lectures with interactive discussion	30	23.1
T&L2. Reading, case-based study and analysis	10	7.7
T&L3. Tutorial and online/offline interactive activities	50	38.5
T&L4. Business proposal and technology project planning	20	15.4
T&L5. Presentations and pitching	20	15.3
	Total: 130	Total: 100

9. Assessment Methods			
Assessment Methods	Description	Weight %	Aligned Course Learning Outcomes
A1.	Online Certification  Students are to take part in ACA Cloud Computing Certification (excluding the certificate assessment outcome). Students are also encouraged to take part in other optional certification. See detail in course content.	25%	1,4
A2. Project (Group)—	Project and Presentation	40%	1,2,3,4,5

## 9. Assessment Methods

Presentation	Aspirations and comprehensive project on multi-disciplinary business design and technological topics – Project-based entrepreneurship assignments. The students will present their full project at the end of the course.		
A3. In-class Activities/ Discussion	Practice in group discussions and class engagements.  Overall participation, interactive discussion and contribution to class.	35%	1,2,3,4,5
A4. Final Exam		0%	

## Assessment Rubrics

A2. Project (Group)— Presentation	Students' project submission and presentation will be assessed based on requirements set in each brief handed out. In general, these will be of equal importance: relevant and thorough analysis, development process, quality of works and presentation.
A+,A,A-	
B+,B,B-	
C+,C,C-	
D+,D	
F	
A3. In-class Activities/ Discussion	Student to note that relevant trials and engagements are the key of success in this course. Simply submitting the project in the way as checklist 'box-ticking' will not be sufficient.
A+,A,A-	
B+,B,B-	
C+,C,C-	
D+,D	
F	

## 10. Course Grade Descriptors

A+,A,A-	Candidate has consistently demonstrated a thorough understanding and original view of the subject as evidenced by exceptionally astute analysis and synthesis. Authentic style has been established and shown in the project development.
B+,B,B-	Candidate frequently demonstrated a substantial understanding of the subject and has demonstrated his/her effort in achieving the project brief and requirement.
C+,C,C-	Some of the responses are well organized, clear but with insufficient elaboration – there is significant room for improvement to achieve a more satisfactory level to the project course or project requirement.
D+,D	Solutions to questions and problems containing unstructured but relevant observations. Candidate has shown marginally interest in the subject.
F	Little evidence of basic familiarity with the subject, nor demonstration of sufficient effort to basic project and course requirement.

## 11. Course Content and Tentative Teaching Schedule

Topic/ Session	Content	Other information
	<p>Students' project submission and presentation will be assessed based on requirements set in each brief handed out. In general, these will be of equal importance: relevant and thorough analysis, development process, quality of works and presentation.</p> <p>Student to note that relevant trials and engagements are the key of success in this course. Simply submitting the project in the way as checklist 'box-ticking' will not be sufficient.</p>	
	The course comprises 5 Alibaba Cloud modules plus 3 classes on entrepreneurship and students' business proposal presentations.	
1	<p>Module 1 - ACT81001 Alibaba Cloud Technical Essentials</p> <p>In the era of Data Technology, you may be asking the following questions: What is cloud computing? How do cloud products like Elastic Compute Service, RDS, Server Load Balancer, and Object Storage Service for Alibaba Cloud work? Where and why should I use cloud services to replace my traditional IT infrastructure?</p> <p>Highlight</p> <ul style="list-style-type: none"> <li>- Understand the big picture of Alibaba Cloud products portfolio</li> <li>- Quickly know the key products in Cloud Computing, Security and Big data area</li> <li>- Learn reference cases from real customers</li> </ul> <p>Training Outline</p> <ul style="list-style-type: none"> <li>- Alibaba Cloud History and Competency Overview</li> <li>- How to implement application load balancing plus static and dynamic data separation - Alibaba Cloud Fundamental Architecture Introduction and Reference Cases</li> <li>- How to achieve auto-scaling and cloud networking - Alibaba Cloud Elastic Architecture Introduction and Reference Cases</li> <li>- How to do big data retrieving, sorting and analyzing - Alibaba Cloud Data Analysis Architecture Introduction and Reference Cases</li> <li>- Protect your asserts in Cloud - Alibaba Cloud Security Solutions and Management Tools overview</li> <li>- Understand how to easily do online business in China mainland - China Gateway (ICP, Alibaba Ecosystem, Managed Service etc.) Introduction</li> </ul>	<p>Certification: ACA Cloud Computing Certification</p> <p>Alibaba Cloud Certification Associate (ACA - Alibaba Cloud Certification Associate) is a certification designed for those who can use Alibaba Cloud Computing products. It covers all of Alibaba Cloud's core products from computing and storage, to networking and security.</p>
2	<p>Module 2 - ACT81002 Alibaba Cloud Basic Products</p> <p>The "ACT81002 Alibaba Cloud Basic Products" course is designed to provide Developers, Technical Operators, Solution Achitecturing</p>	<p>Certification: ACA Cloud Computing Certification</p>

## 11. Course Content and Tentative Teaching Schedule

	<p>Engineers with deployment and management skills for Alibaba Cloud basic products including ECS, OSS, SLB, RDS etc. Moreover, it includes intuitive online labs led by experienced instructors to help you obtain direct hands-on experience on those products's configuration and operations.</p> <p>Highlight</p> <ul style="list-style-type: none"> <li>- Prepare for Cloud Computing Certification Exam</li> <li>- Fully understand cloud fundamental architecture and elastic architecture</li> <li>- Get familiar with our key products and operations for computing, storage and networking</li> <li>- Get hands-on experience using the Alibaba Cloud console</li> </ul> <p>Training Outline</p> <ul style="list-style-type: none"> <li>- Alibaba Cloud Services Overview</li> <li>- Elastic Compute Service (ECS)</li> <li>- Server Load Balancer (SLB)</li> <li>- Object Storage Service (OSS)</li> <li>- Relational Database Service (RDS)</li> <li>- Hands-on Lab</li> </ul>	
3	<p>Module 3 - ACA Business User</p> <p>The ACA Business User Certification exam preparation course offers an online interactive course that covers the concepts of cloud computing and the services available in the Alibaba Cloud using simple analogies. It is designed to help you understand cloud services in a simple way and identify the services available in Alibaba Cloud that can meet certain requirements of the business organizations. Last but not least, it can be used as a guide and material to help you prepare for the ACA Business User Certification.</p>	
4	<p>Module 4 - ACT81005 Alibaba Cloud Advanced Products</p> <p>The "Alibaba Cloud Advanced Products" course is designed to provide Developers, Technical Operators, Solution Architecting Engineers with deployment and management skills for Alibaba Cloud basic products including VPC, Auto-Scaling, CDN, Security Products, etc. Moreover, it includes intuitive online labs led by experienced instructors to help you obtain direct hands-on experience on those products configuration and operations.</p> <p>Highlight</p> <ul style="list-style-type: none"> <li>- Prepare for Cloud Computing Certification Exam</li> <li>- Fully understand cloud fundamental architecture and elastic architecture</li> <li>- Get familiar with our key products and operations for computing, storage and networking</li> <li>- Get hands-on experience using the Alibaba Cloud console</li> </ul> <p>Training Outline</p>	<p>Certification: ACP Cloud Computing Certification (optional)</p> <p>ACP Cloud Computing Certification is designed for those familiar to cloud computing and with a rich operational knowledge of Alibaba Cloud products. This certification covers a spectrum of Alibaba Cloud core services, including architecture, networking, cloud security, and best practices.</p>

## 11. Course Content and Tentative Teaching Schedule

	<ul style="list-style-type: none"> <li>- Content Delivery Network (CDN)</li> <li>- Auto Scaling</li> <li>- Cloud Resource Monitoring</li> <li>- Introduction of Alibaba Cloud Security Products</li> <li>- Alibaba Cloud Certification Exam Preparation</li> </ul>	
5	<p>Module 5 - ACT82005 Alibaba Cloud Machine Learning and AI</p> <p>In this course, learn how to build Machine Learning and AI systems on Alibaba Cloud using MaxCompute, DataWorks, and Alibaba Cloud's Platform for AI (PAI). The course covers AI and machine learning basics as well as concrete knowledge required to use PAI effectively. Learn hands-on with an included lab which will take you from zero to a working Machine Learning model.</p> <p>Highlight</p> <ul style="list-style-type: none"> <li>- Learn the basics behind modern Machine Learning and AI techniques</li> <li>- Learn about Alibaba Cloud's Platform for AI (PAI)</li> <li>- Build and train a simple model in PAI</li> <li>- See how Alibaba Cloud applies ML &amp; AI technology to power Alibaba Group's many businesses, especially Alibaba's retail arm: TMall and Taobao.</li> </ul> <p>Training Outline</p> <ul style="list-style-type: none"> <li>- AI &amp; ML Concepts (Overview)</li> <li>- AI at Alibaba Group: Smart Cities, Double 11, and more</li> <li>- Alibaba Cloud's Platform for AI (PAI)</li> <li>- Cloud-native ML &amp; AI systems management (AI training, deployment, and day-to-day use)</li> <li>- AI on Kubernetes: building and training AI systems on K8s</li> </ul> <p>(Alternative to Module 4, to be confirmed before programme starts)</p> <p>ACT81006 Alibaba Cloud Network Solutions</p> <p>This course is designed to introduce Alibaba Cloud network solution which can help our customers substantially solve many challenges like cross region, cross border, hybrid cloud connection, etc. Our solution provides E2E data transmission encryption, global network coverage and ultra-low latency to eliminate enterprises' security and reliability concerns. In addition, our smart routing mechanism and enterprise grade reliability will also be introduced in this training, so that you will know how to connect your cloud service endpoints seamlessly access worldwide.</p> <p>Highlight</p> <ul style="list-style-type: none"> <li>- Overview of Alibaba Cloud Network Products</li> <li>- Understand the background and advantages of private networks</li> <li>- Get hands-on experience using Alibaba Cloud's console to manage network products</li> </ul> <p>Training Outline</p> <ul style="list-style-type: none"> <li>- Cloud-based Network Foundation</li> </ul>	<p>Certificates: ACP Cloud Networking Certification (Optional)</p> <p>The ACP Cloud Networking Certification exam is designed to test the knowledge and skills of engineers who use networking services and solutions of Alibaba Cloud. Obtaining this certification indicates that you are able to develop effective solutions based on the features of Alibaba Cloud networking services and the business requirements of enterprises, and provide technical consultations and solutions for common scenarios, such as migration to cloud and networking.</p>

## 11. Course Content and Tentative Teaching Schedule

	<ul style="list-style-type: none"> <li>- 'Network On Cloud' related products introduction including VPC, SLB, NAT Gateway, EIP, etc.</li> <li>- 'Network In Cloud' related products introduction including CEN and GA, etc.</li> <li>- 'Network to Cloud' related products introduction including Express Connect, VPN Gateway, Smart Access Gateway, etc.</li> <li>- Alibaba Cloud Network Solutions and applicable scenarios.</li> </ul>	
	<p>Module E – Creative Cloud Computing Market Adoption</p> <p>Module content:</p> <ol style="list-style-type: none"> <li>1. Changing business/market/social environment and condition in Cloud Computing</li> <li>2. Blockchain and Web3 concept, and the relationship with Cloud Computing</li> <li>3. Cloud-computing business services</li> <li>4. Cloud-computing project commercialization and scale-up</li> <li>5. Cloud-computing-based business project in practice</li> </ol>	The course may include interactive lectures, guest speakers and visits

## 12. Required/Recommended Readings & Online Materials

Reading	<p><b>Technology Entrepreneurship: Taking Innovation to the Marketplace</b> by Thomas N. Duening, Robert D. Hisrich and Michael A. Lechter</p> <p><b>New Venture Creation: Entrepreneurship for the 21st Century</b> by Timmons, Jeffry A., and Stephen Spinelli</p> <p><b>Business Model Generation</b> by Alex Osterwalder</p> <p><b>The Innovation Blind Spot: Why We Back the Wrong Ideas—and What to Do About It</b> By Ross Baird, September 2017 (BenBella Books)</p> <p><b>The Lean Start-Up</b> by Eric Reis</p> <p><b>Blue Ocean Strategy: How to Create Uncontested Market Space and Make Competition Irrelevant</b> By Chan Kim, Renee Mauborgne</p> <p><b>Thank You for Being Late: An Optimist's Guide to Thriving in the Age of Accelerations</b> by Thomas L. Friedman Innovation and Entrepreneurship, by Peter Drucker</p> <p><b>Online Articles</b></p> <p><b>"The Innovator's DNA"</b> Harvard Business Review by Jeffery Dyer. Covers the key activities that separate innovative managers from the rest of the pack.</p> <p><b>"How to be a Student Entrepreneur Without Losing Your Mind"</b>. 11 How-to tips to make you successful.</p> <p>Plus online training materials from Alibaba Cloud Academic Empowerment Programme</p>
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## 13. Means / Processes for Student feedback on Course

✓	Conducting mid-term survey in additional to SETL around the end of the semester
	Online response via Moodle site
	Others

#### 14. Course Policy

General requirements in plagiarism, academic honesty and attendance apply. Any lateness or absence to the class needs to have the lecturer(s) officially informed with sound reason – otherwise penalty in the form of mark deduction might apply.

#### 15. Additional Course Information

Further to what has been described in the assessment section, participation and engagement in the class and tutorial is required in this course. Lecturers will help students to see into their own work and to assist to bring it into its fullest manifestation, through an effective and interactive learning.