Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: _____   Dept/Division: _____   Alpha Designator/Number: _____   ◯ Graded   ◯ CR/NC

Contact Person: _____   Phone: _____

NEW COURSE DATA:

New Course Title: _____

Alpha Designator/Number:

Title Abbreviation:

(Limit of 25 characters and spaces)

Course Catalog Description:
(Limit of 30 words)

Co-requisite(s): _____   First Term to be Offered: _____

Prerequisite(s): _____   Credit Hours: _____

Course(s) being deleted in place of this addition (*must submit course deletion form*): _____

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head _____   Date _____

Registrar _____   Date _____

College Curriculum Chair _____   Date _____

Graduate Council Chair _____   Date _____

College: _____   Department/Division: _____   Alpha Designator/Number: _____

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "**Not Applicable**" if not applicable.

3. REQUIRED COURSE: If this course will be required by another deparment(s), identify it/them by name. Enter "**Not Applicable**" if not applicable.

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "**Not Applicable**" if not applicable.

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "**Not Applicable**" if not applicable:

6. COURSE OBJECTIVES: (May be submitted as a separate document)

7. COURSE OUTLINE   (May be submitted as a separate document)

8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)

9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

12. PROVIDE COMPLETE BIBLIOGRAPHY   (May be submitted as a separate document)

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Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Course Number and Title:
Catalog Description:
Prerequisites:
First Term Offered:
Credit Hours:

CS 602 Cloud Computing

Course Title/Number	Cloud Computing/602
Semester/Year	Fall/2019
Days/Time	TBD
Location	TBD
Instructor	Dr. Husnu Narman
Office	WAEC 3107
Phone	X5829
E-Mail	narman@marshall.edu
Office Hours	TBD
University Policies	By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to www.marshall.edu/academic-affairs and clicking on "Marshall University Policies." Or, you can access the policies directly by going to www.marshall.edu/academic-affairs/policies/. Academic Dishonesty/Excused Absence Policy for Undergraduates/Computing Services Acceptable Use/Inclement Weather/Dead Week/Students with Disabilities/Academic Forgiveness/Academic Probation and Suspension/Academic Rights and Responsibilities of Students/Affirmative Action/Sexual Harassment

Course Description

Study of emerging and advanced topics in Cloud Computing including theory and application development in cloud and understand the ways of increasing quality of services for hosted applications.

Course Student Learning Outcomes

Course Student Learning Outcomes	How students will practice each outcome in this Course	How student achievement of each outcome will be assessed in this Course
Understanding Basic Cloud Computing concepts	Group discussions	Graded homework assignments
Understanding Advanced topic such as Recovery, Fault Tolerance and Security Issues in Cloud	Homework Assignments, Group discussions	Graded exam problems Graded homework assignments
Understanding and developing Cloud based application.	Homework, In class examples, Group discussions	Graded exam problems Graded homework assignments

Required Texts, Additional Reading, and Other Materials

Required Text

Kai Hwang, Jack Dongarra , and Geoffrey Fox; Distributed and Cloud Computing From Parallel Processing to the Internet of Things (October 31, 2011) - ISBN: 978-0123858801

Other Materials

Kenneth P Birman; Reliable Distributed Systems: Building High-Assurance Applications and Cloud-Hosted Service (February 23, 2014) - ISBN: 978-1447158424

Dan C. Marinescu; Cloud Computing Theory and Practice (November 27, 2017) - ISBN: 978-0128128107

Course Requirements / Due Dates

Midterm Examinations

Midterm exam is during regular class hours in Week 8.

Homework Assignments

Homework problems will be assigned bi-weekly (starting from week 2)

Attendance Policy

Missing more than 3 classes will result in a 10 points reduction from your final grade.

Grading Policy

Activity	Points
Attendance	10
Midterm Exam	30
Homework Assignments	30
Final Exam	30
Total	100

Course grades are awarded based on the following scheme:

Score	Letter Grade
>= 90	A
>= 80 & < 90	B
>= 70 & < 80	C
>= 60 & < 70	D
< 60	F

Course Schedule

This is the list of topics. This could be adjusted as the semester progresses at the discretion of the instructor. Lecture slides will be posted to MUOnline.

Week	Schedule
1	Intro to Cloud
2	Distributed System Models and Enabling Technologies
3	Deployment Models and Service Types
4	Iaas and Virtualizations (Example Azure VM)
5	Paas (Example Azure DevOps)
6	PaaS Techniques: File System (Example GFS and HDFS)
7	Paas Techniques: Programming Model (Example Map Reduce and Pregel)
8	PaaS Techniques: Storage (Example: Big Table and HBase: Theorem: CAP, Raft)
9	Midterm exam
10, 11	Unstructured/Semi-Structured Data organization: NoSQL (Example MongoDB)
12, 13	SaaS and SaaS Techniques (Example Salesforce and eyeOS cases)
14	Thanks Giving

15	Security, Law and Standards in Cloud
16	Final Exam