

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: CITE Dept/Division: Computer Science Alpha Designator/Number: CYBR/680 Graded CR/NC

Contact Person: Dr. Wook-Sung Yoo Phone: x5452

NEW COURSE DATA:

New Course Title: Research in Cybersecurity

Alpha Designator/Number: C Y B R / 6 8 0

Title Abbreviation: R e s e a r c h i n C y b e r s e c u r i t y

(Limit of 25 characters and spaces)

Course Catalog Description: ~~Study~~ research methods and current significant findings in the field of cybersecurity.
(Limit of 30 words)

This course covers various

Co-requisite(s): None First Term to be Offered: Fall 2019

Prerequisite(s): CYBR 510 Credit Hours: 3

Course(s) being deleted in place of this addition (must submit course deletion form): N/A

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

Dept. Chair/Division Head <i>[Signature]</i>	Date <u>9/17/18</u>
Registrar <i>[Signature]</i> 110101	Date <u>9/21/18</u>
College Curriculum Chair <i>[Signature]</i>	Date <u>9/26/18</u>
Graduate Council Chair _____	Date _____

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College: CITE

Department/Division: Computer Science

Alpha Designator/Number: CYBR/680

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.

Wook-Sung Yoo, Ph.D.

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.

Not Applicable

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

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.

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.

Not Applicable

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

Please see attached document

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

Please see attached document

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

Please see attached document

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

Please see attached document

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

Exam, Homework Assignments and Projects

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

Not applicable

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

Please see attached 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:

Department: Computer Science
Course Number and Title: CYBR/680 Research in Cybersecurity
Catalog Description: This course covers various research methods and current significant findings in the field of cybersecurity.
Prerequisites: CYBR510
First Term Offered: Fall 2019
Credit Hours: 3

BIBLIOGRAPHY

Research Methods for Cyber Security, 1st Edition, Thomas W. Edgar David O. Manz, Syngress, April 2017, ISBN: 9780128053492.

CYBR 680 Research in Cybersecurity

Course Title/Number	Research in Cybersecurity /CYBR 680
Semester/Year	Fall/2019
Days/Time	TBD
Location	TBD
Instructor	TBD
Office	TBD
Phone	TBD
E-Mail	TBD
Office Hours	TBD
University Policies	<p>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</p>

Course Description

This course covers various research methods and current significant findings in the field of cybersecurity. (PR: CYBR510).

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
Students will be able to explain different research method	Homework assignments, In class examples, Group discussions	Graded exam problems Graded homework assignments
Students will be able to do literature survey	Homework Assignments, Research report	Graded homework Graded research report
Students will be able to write research paper	Report and presentation	Presentation evaluation Graded report paper

Required Texts, Additional Reading, and Other Materials

Required Text

Research Methods for Cyber Security, 1st Edition, Thomas W. Edgar David O. Manz, Syngress, April 2017, ISBN: 9780128053492.

Course Requirements / Due Dates

Examinations

There will be two midterms

Homework Assignments

Weekly report on reading assignments

Report

Final report and presentation is due at the end of the term.

Attendance Policy

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

Grading Policy

Course grades are based on the total points earned for all activities and the grading scale shown below:

Activity	Points
Exams	30
Weekly Report	20
Presentation and Final Report	50
Total	100

Scale	
Score 70- 100	P
Below 70	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	Introduction to research and topic
2	Literature Survey
3	Science and Cybersecurity
4	Observational Research Methods
5	Descriptive Study

6	Machine Learning
7	Theoretical Research
8	Midterm 1
9	Simulations for Research
10	Experimental Research Methods
11	Midterm 2
12	Report on the research
13	Applied Research Method
13	Ethics in Cybersecurity
15	Final research presentation