USF Sarasota-Manatee - Substantive Undergraduate Course Proposal Form

1. **College/School Contact Information**

Tracking Number	Date & Time Submitted	
26	2013-12-19 11:28:23.0	
Discipline	**College/School**	**Budget Account Number**
Information Technology		380700004
Contact Person	**Phone**	**Email**
Sarah Smith	9413594619	sarah43@sar.usf.edu

2. **Course Information**

Prefix	Number	Full Title
CIS	4204	Ethical Hacking

Is the course title variable?	N
Is a permit required for registration?	N
Are the credit hours variable?	N

Credit Hours	Section Type	Grading Option
3	Class Lecture (Primarily)	Regular

Abbreviated Title (30 characters maximum)
Ethical Hacking

5. Prerequisites
   Programming course and a math course
6. Corequisites
7. Co-Prequisites
8. Course Description
   Provides an understanding of computing, networking, exploitation techniques, used for IT security. In testing, a legal ethical hacker tries to penetrate a system, finds its weakest link and analyzes ways to correct security flaws.
9. **New Course Information**

New Prefix	New Number	New Full Title
N/A	N/A	N/A

Is the course title variable?	N
Is a permit required for registration?	N
Are the credit hours variable?	N

New Credit Hours	New Section Type	New Grading Option
N/A	Class Lecture (Primarily)	Regular

New Abbreviated Title (30 characters maximum)
N/A

12. New Prerequisites
    COP 2030 and MAD 2104
13. New Corequisites
    N/A
14. New Co-Prerequisites
    N/A
15. New Course Description
    N/A
16. **Justification**

    A. Nature of change(s)

        Without specific prerequisites listed in banner, students are entering this class unprepared. The result is students flounder in the course and end up having to drop it or get a poor grade. Explicitly stating the pre-reqs will ensure their inclusion in the catalog as well as preventing students from enrolling without taking the pre-reqs.

    B. Indicate how this course will strengthen the Undergraduate Program.

        Students will take courses in the correct sequence and be better prepared.

    C. What specific area of knowledge is covered by this change that is not covered by courses currently listed.

        n/a

    D. What is the need or demand for this course? {Here you must indicate if this course is part of a required sequence in the major} What other programs would this course?

        This course is a core course for the Information Security concentration. Attendance for this course has been consistently high (35-40).

    E. What qualifications for training and/or experience are necessary to teach this course?

        Master's degree is required with 18 graduate credit hours in the discipline.

    F. What will be the effect of this change on the program and on the students? Do you plan to drop a course if this change is made? (If dropping/deleting a course please complete the nonsubstantive course change form.)

        No course will be dropped. Program will be more effective for students are they will build knowledge appropriately throughout their class sequence.

17. **Other Course Information**

    A. Objectives

Major course objectives include: - A key objective is to train students to see their network through the eyes of a hacker - Ethical hacking relies on a combination of creativeness, expansion of knowledge based on best practices, legal issues, and client industry regulations as well as known threats and the breath of the target organizations security presence or point of risk. - The above requires a basic understanding of computing, networking, programming concepts, and exploitation techniques, as related to computer security. - Students will also learn to perform security testing as an ethical hacker (with legal permission) and attempt to penetrate systems to find a weak link - Another objective is and impart analysis techniques to correct the security flaws.

B. Learning Outcomes

1. General computer organization and architecture 2. Ethical Hacking methodology 3. Generalized exploit techniques 4. Basic network concepts 5. Networking vulnerabilities and countermeasures

C. Major Topics

1. Network communications fundamentals (hardware and software) 2. Preparing to hack - footprinting, scanning, enumeration 3. Hacking Windows, UNIX, software, web servers and apps 4. Hacking via SQL injection, firewalls, IDSs, honeypots 5. Social Engineering, viruses, worms, Trojans, bots, and hoaxes

D. Textbooks

Required reading: Hacking Exposed: Network Security Secrets and Solutions, 7 By: Stuart McClure, Joel Scambray, and George Kurtz ISBN: 0071780289 Other books useful for bolstering overall knowledge of ethical hacking will be mentioned during class.