國立台灣科技大學新開課程計畫書

<table>
<tr>
<td rowspan="2">1.</td>
<td>開課所系
Department</td>
<td colspan="4">資訊工程系</td>
<td colspan="2">103　學年度第 2 學期
Year　　　Semester</td>
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<td colspan="6">其他：
Other time:</td>
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<td rowspan="3">2.</td>
<td>課程代號
Course Code</td>
<td colspan="2">CS5130</td>
<td>選 必 修
Required/
Elective</td>
<td>選修</td>
<td>開 課 年 級
Grade</td>
<td>大四、研究所</td>
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<tr>
<td rowspan="2">課程名稱
Course Title</td>
<td colspan="6">中文(Chinese) 資安檢測實務</td>
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<tr>
<td colspan="6">英文(English)　The Practices of Information Security</td>
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<td>3.</td>
<td>學 分 數
Credits</td>
<td>3</td>
<td>上課時數
Total Hours</td>
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<td>實習時數
Intern Hours</td>
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<td>4.</td>
<td>通識課程領域別
Type of General
Education Course
(若屬通識課程請勾選)
(Please select this item of
G/E course.)</td>
<td colspan="2">□人文領域
Humanity</td>
<td colspan="2">□社會領域
Sociology</td>
<td colspan="2">□自然領域
Nature</td>
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<td>5.</td>
<td>先修課程或特殊
規　　　　定
Pre-Requisite</td>
<td colspan="6">修習過資訊安全導論，瞭解網站開發與手機APP開發背景</td>
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<td>6.</td>
<td>課程宗旨
Purpose of The
Course</td>
<td colspan="6">說明目前業界在資安檢測上的實務經驗討論以及常見檢測之方法論，培養同學具有基本網站與手機APP檢測能力與專案管理技能，並對檢測結果具有分析與實作之能力
培養同學具備創新服務研發之實作能力</td>
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7.	課程中文大綱
	
	Outline of Lectures
	
	(In Chinese)
		本課程將介紹業界上常見網頁資安檢測與手機APP檢測之相關技術以及實作技巧，課程包含資安檢測方法論、OWASP檢測標準與方法、Metasploit使用實務、手機APP檢測流程、項目與技巧，課程中將不定期安排實機操作與相關資安新聞事件分析探討，以使同學能實際了解目前業界在實務上的需求與資安事件上的發展趨勢。
		本課程在案例實作上，首先會先讓同學有基本滲透測試的知識與技能，同時將帶著同學實際操作具有弱點的網站，了解目前國內外常見的弱點，最後教導同學使用實務上最常使用的滲透測試工具Metasploit，藉由功能模組解析，瞭解實際檢測上的各項操作。
		而在目前新興的行動軟體檢測上，則會教導同學實務的操作方法與風險評估，並視情況帶領同學實際針對Google Play/App Store/MS Marketplace上的APP軟體檢測操作，瞭解實際各APP市集架上常見的APP弱點，並討論如何預防與避免。透過交互討論思考，建立未來可行的創新的應用服務。
		
		1.滲透測試簡介
		  1.1.滲透測試定義
		  1.2.滲透測試方法與流程
		  1.3.滲透測試過程細節
		  1.4.滲透測試框架
		2.漏洞分析與利用
		  2.1.安全漏洞生命週期
		  2.2.安全漏洞公共資源庫
		  2.3.弱點網站檢測方法操作(WarGame)
		3.Metasploit簡介與操作
		  3.1.Metasploit結構剖析
		  3.2.Metasploit各功能模組框架
		  3.3.Metasploit實務操作
		  3.4.msfgui圖形化界面工具
		4. 行動軟體(APP)檢測流程與項目
		  4.1.行動軟體(APP)安全檢測框架
		  4.2.行動軟體(APP)安全檢測方法
		  4.3.行動軟體(APP)安全檢測查核與風險評估

8.	課程英文大綱 Outline of Lectures (In English)	This course will introduce some common web security testing procedures, mobile applications (APPs) and related technologies and skills in current industry practices, including most famous security testing methodology, OWASP testing standards and methods, Metasploit practices, APP detection process, project and skills. Some information security-related news and events will also be analyzed and discussed in this course. This can enable the students to actually understand the industry's needs and the development trend. This course aims to provide relevant practical training. First, it will let students have basic knowledge and skills of penetration testing. Then, students will take the actual operations in some weaknesses websites, and finally they will use the most common practice penetration testing tools, i.e., Metasploit, to understand the operations in actual industry testing. Besides, in this course, the teacher will also teach students methods and risk assessment practices, and lead students to detect the actual software weakness in current APP marketplaces, such as Google Play / App Store / MS Marketplace. So that students can understand common weaknesses that developers often make, and discuss how to prevent and avoid it. Through interactive discussions will also help students to establish a viable future innovative applications and services. 1. Introduction Penetration Testing 1.1 Penetration testing definition 1.2 The penetration testing methods and procedures 1.3 The penetration test details 1.4 Penetration testing framework and software 2. Vulnerability Analysis and Utilization 2.1 The security vulnerability life cycle 2.2 Security vulnerabilities in public library 2.3 The weakness of some vulnerable websites (WarGame) 3. Metasploit Introduction and operation 3.1. Metasploit structure analysis 3.2. Metasploit framework of the functional modules 3.3. Metasploit practical operation 3.4. Msfgui graphical interface tool 4. Mobile Software (APP) testing process 4.1 APP security testing framework 4.2 APP security detection method 4.3 APP security check and risk assessment
9.	校內有否開設類似課程 Similar Course In Campus	☑　否 　　No ☐　有，其課程名稱為： 　　Yes(Please specify course title):
10.	任課教師 Lecturer	陳培德

所　　　　　長：
系（科）主任：
學 程 主 任：＿＿＿＿＿＿　院　長：＿＿＿＿＿　日　期：＿＿＿＿＿

系務會議決議 ：103.12.16資工系103學年度第4次系務會議通過　教務會議決議：＿＿＿＿＿

（本表可自課務組網站「表單下載」處下載，本表完成後請mail至課務組muktilai@mail.ntust.edu.tw信箱）