

掌握核心网络安全操作域  
的分析及深入理解能力。

Developing analytical knowledge and deeper understandings of  
several core cyber security operational domains.



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# 互联网基础建设 网络安全与骇客科技

IT INFRASTRUCTURE  
Cyber Security (ITCSI)

- » 80% 实践训练  
80% Practical Skills
- » 20% 理论  
20% Theory
- » 2+1 课程  
2+1 Learning
- » 16岁以上即可报读, 无需入学资格  
Entry Requirement: 16 Years Old & Above
- » 教学媒介语以中文为主, 英文为辅  
Medium of Instruction: Chinese & Simple English



# 2+1 年课程

## Years Course

本课程为因应资讯科技的迅猛发展及有以下意愿的学生而设：  
**This qualification was developed to keep pace with the fast changing information technology sector and for candidates who want :**

- 掌握核心网络安全操作域的分析及深入理解能力，以便在企业或公关机构谋求更高职业生涯发展。  
Develop a more advanced career in a specific area of business or public organizations by developing analytical knowledge and deeper understandings of several core cyber security operational domains.
- 学习与网络安全工作相关的知识与技能，造就成功的职业生涯。  
Develop the knowledge, understanding and skills required for success in cyber-security related employment.
- 有效应用本课程传授的知识与技能，培植在商业技术及风险管理环境中表现卓越的能力。  
Develop their ability to contribute positively to good practice in business technology and risk management environments through effective use and combination of the knowledge and skills gained in the qualification.
- 维护和支持ICT系统。  
To maintain and support ICT systems
- 信息和通信技术(ICT)行业在职业上的发展。  
Career progression within the Information and Communication Technology (ICT) industry
- 处理中小型计算机网络。  
Handle small and medium size computer networking.

此两年制资讯科技技职课程通过实践操作，传授学生数据通信的知识与技能，拓展学生的深造与就业机会。  
The two-year Vocational Course in IT infrastructure and networking provides student with hands-on knowledge of data communication skills to enhance their educational and employment opportunities.

### 学生将学习 / Students will learn and be able to:

- » 如何完全明白地阅读和充分利用相关技术及网络安全文献(包括威胁的情报源)的能力，以及掌握独立思考及解决企业或组织潜在的总体网络安全问题的能力。The ability to read and utilize relevant technical and security literature (including threat intelligence feeds) with a full understanding; the ability to think independently and solve potential overarching cyber security issues within a business or organization.
- » 理解及关切网络安全威胁具全球性质，同时明了基于尊重、热烈期待及愿意进行多元学习，包括学习国际商业惯例及全球营运的重要性。  
Instill and embed a sense of understanding and respect of the global nature of the cyber threat environment; as well as the criticality of respecting, anticipating and learning from diverse, international business practices and the global operating context.
- » 关键基础设施安全系统和设备。  
Critical Infrastructure Security System and Devices
- » 智能计算与控制设备及系统安全。  
Intelligent Computing and Controlling Devices and Systems Security
- » 商业信息技术(IT)网络安全系统与技术。  
Business Information Technology (IT) Network Security Systems and Techniques
- » 工业/公用事业控制系统(ICS)网络与设备安全。  
Industrial/Utility Industrial Control System (ICS) Networks and Devices Security
- » 道德骇客的角色与工具(网络战)。  
Ethical Hacking Roles and Tools (Cyber Wars)
- » 安装、配置与维护网络系统及基础架构。  
Installing, configuring and maintaining, network systems and infrastructure.
- » 按照行业标准网络程序进行工作。  
Working to industry standard networking procedures.
- » 各种类型的网络和服务器系统管理，包括其安全性方面。  
Various types of network and server systems administration including their security aspects.
- » 安装设计、构建及维护复杂的路由WAN，交换式LAN网络与拨号访问服务。  
Installing designing, building and maintaining complex routed WAN, switched LAN networks, and dial access services.
- » 掌握Linux、资讯科技要点、语音和数据布线及Java技术。  
Skills in Linux, IT essentials, voice and data Cabling, and Java.
- » 建立从基本网络功能到具有高级VLAN故障排除功能的网站。  
Building a website to basic networking skills to advanced VLAN troubleshooting.
- » 配置与管理网络伺服器并利用不同脚本环境构建應用程式。  
Configure and manage web servers and build applications using different scripting environments.
- » 网络设计与系统测试。  
Network design and systems testing.
- » 客户服务要领、人际沟通与团队合作技能。  
Essential customer service, interpersonal communications and teamwork skills.

## 课程内容 / Course Outline

### YEAR 1 第一学年

#### 第一学期 / Semester 1

- 编程概论  
Introduction to Programming
- ICT实务技能  
Practical ICT Skills
- 操作系统(Linux)  
Operating System (Linux)
- 资讯科技概论  
Introduction to Information Technology
- 职场英语(1)  
Workplace English communication (1)

#### 第二学期 / Semester 2

- 资讯科技与社会  
IT and Society
- 网络系统  
Computer Networking
- 管理信息系统  
Managing Information Systems
- 互联网基础建设  
Internet Infrastructure
- 数码影像  
Digital Imaging

#### 第三学期 / Semester 3

- 系统管理  
System Administration
- 网页设计和开发(HTML 5,Java Script & XML)  
Web Design and Development (HTML 5, Java Script & XML)
- 网页与伺服器址编程(PHP)  
Web and Server Site Programming (PHP)
- 数据库系统(MySQL,NoSQL)  
Database Management Systems (MySQL, NoSQL)
- 电子商务系统  
E-Commerce Applications
- 与工作相关的软技能  
Work-based Soft Skills

### YEAR 2 第二学年

#### 第四学期 / Semester 4

- 网络路由与交换术  
Network Routing and Switching
- 接入广域网(WAN)  
Accessing the WAN
- 使用C#进行对象定义程式  
Object-oriented Programming using C#
- 职场英语(2)  
Workplace English communication (2)

#### 第五学期 / Semester 5

- 网络协议与概念  
Network Protocols and Concepts
- 网络设计与支援  
Network Design and Support
- 基础设施安全  
Infrastructure Security
- 地区性主机安全  
Local Host Security
- 地区性网络安全  
Local Network Security
- 网络安全技术  
Cyber Security

#### 第六学期 / Semester 6

- 技术创业  
Technopreneurship
- 企业网络安全  
Enterprise Network Security
- 工业网络安全系统  
Industrial Cyber Security Systems
- 医疗网络安全  
Medical Network Security
- 网络战(骇客攻击、破解与互联网攻击)  
Cyber Wars (Hacking, Cracking & Internet Jacking)
- 网络安全实际操作项目(实验室主要项目)  
Cyber Security Practical Project (Major Lab Project)

\* Please note that the modules listed are indicative and may be subject to change.

## OFQUAL认证

OFQUAL 为英国政府资历及考试规例局，受英国议会监察。

所有学习材料均由该领域的专业人士和专业学术作者设计和编写，以便每个互动模块都符合OFQUAL规定的特定学习目标，OFQUAL是英国高等教育学术标准的英国政府机构。这些标准确保学生获得高质量的教育以及大学的认证和雇主认可。

## OFQUAL Recognition

The Office of Qualifications and Examinations Regulation (OFQUAL) regulates qualifications, examinations and assessments in England.

All learning materials are designed and written by expertise in the field and professional academic authors so that each interactive module is aligned against specific learning criteria specified by OFQUAL, the defining UK Government body for Academic Standards in UK Higher Education. These standards ensure those that learn with us receive a high quality education along with certification that is recognised universally by Universities and employers.



## 评估标准 / ASSESSMENT

100%作业及实践练习，本课程提供网络安全与骇客科技的理论20%与实践80%，聚焦于工作场所的实际应用。鼓励团队合作，让学生学会分组合作或单独工作以完成专题作业。

100% Assignment and Practical Exercises. The course offers both the theory (20%) and practice (80%) of Cyber Security, with a focus on the practical application of these skills in the workplace. Teamwork is encouraged and students learn to work in groups to complete their projects.



## 考取资格 / QUALIFICATIONS

英国国立西苏格兰学院专业文凭和专业高级文凭  
Diploma and Advanced Diploma awarded by West College Scotland, UK

台湾文凭(由台湾各大学颁发)  
Diploma Qualification from Taiwan University

第五级专业文凭(资格获得OFQUAL英国政府学历及考试评审局承认)[选择性]  
Level 5 Diploma (Regulated by OFQUAL - Office of Qualification & Examination Regulation) [Optional]



## 就业前景 / CAREER PATHWAYS

合格专业道德骇客、网络犯罪调查专员、网络安全技术员、网络安全管理员、系统安全工程师、网络工程师、网络安全分析师、资讯科技执行员、资讯科技监督员、资讯科技执行员、网络构建技术技术工程师、网络服务器管理工程师、网络系统分析师、网络安全分析师、网络软件工程师、网络系统管理人员、数据库管理人员等等。

Certified Ethical Hacker, Cyber Forensic Specialist, Network Security Technician, Security Systems Administrator, Network Engineer, Systems Engineer, Security System Engineer, IT Executive, IT Supervisor, IT Infrastructure Engineer, Server Maintenance Engineer, Network Systems Analyst, Security Analyst, Network Software Developer, Network Systems Manager, Database Administrator, etc.