Postgraduate Diploma in Science in Cybersecurity
(Classroom delivery) (1 Year)

For programmes described as Classroom Delivery, there will be a mixture of online and on-campus delivery. The college will transition back to classes on campus in accordance with Government guidelines. Students should be prepared for a return to campus and also note in some instances, some elements of online learning may remain in place as required.

Location: IFSC and online.

Start Date: The course is expected to start in the week commencing 20th September 2021.

Indicative Schedule Monday & Wednesday 18.00 - 22.00 and a number of Saturdays 09.00 - 18.00.

Career Bridge classes will be delivered one day per week in Semester 2 from 17.00 to 18.00. Day to be confirmed.

Duration: Sept to Dec 2021, Jan to May 2022 & May to Aug 2022

Applications: Apply online at www.springboardcourses.ie

Fees: A student contribution fee of €695 is applicable if you are in employment. No fees applicable if you are unemployed.
The scheme does not cover any allowance for books and materials.

If a student contribution fee is applicable this must be paid in full no later than Friday 19th of November 2021.

Course Description
Cybersecurity is an essential need for a modern society in which information technology and services pervade every aspect of our lives. Cybersecurity has the fastest growth rate while the labour market encounters a severe workforce shortage. As a graduate of the course you will be able to:

· Conduct independent research and analysis in the cybersecurity domain including secure application design, development and testing within a given context e.g. web, cloud computing, and forensic investigation
· Demonstrate practical skills and expert knowledge of technologies and tools that support cryptanalysis, application and service vulnerability detection and patching, security incidents detection and log file analysis
· Critically evaluate the design and implementation and evaluation of a research idea
· Analyse and evaluate the legal, ethical and economic ramifications of developing secure applications and services
· Communicate effectively to a range of audiences in both written and verbal media and undertake self-learning in order to acquire new knowledge

Career Prospects
Cybersecurity issues are becoming a daily struggle for businesses. Recent trends show that the side effects of a global pandemic and cybersecurity statistics reveal a huge increase in hacked and breached data from mobile and IoT devices. Remote working has also ramped up incidences of cyber attacks. The Irish government is seeking to fill the shortage of skilled cybersecurity personnel to protect

companies against cybercrime as well as respond to security breaches. 2020/21 graduates from this course secured roles in Bank of Ireland (Cyber Security Analyst), Central Bank of Ireland (Information Security Analyst), Facebook (Forensics & eDiscovery Intelligence Analyst), Irish Life (Automation Developer), Telus (Business Support Analyst), Visma Labs (Security Engineer), Accenture (Cyber Security Analyst), An Garda Siochana (Cyber Crime Unit), Abbott (Senior Cyber Security Analyst), Microsoft (Investigative Analyst).

Who is the course for?
This course is ideal for ICT professionals or graduates with a level 8 degree on National Framework of Qualifications (NFQ), in computing/ computer science or in a cognate area (STEM) that wish to develop a career as a cybersecurity professional; to take a leading technical or managerial role; to progress faster in their employment or to apply the knowledge in their current role. Candidates who do not hold a computing degree and are currently working in the IT sector may be considered based on relevant academic qualifications or extensive work experience. Candidates are expected to have programming ability.

Award and Progression
Graduates of the Postgraduate Diploma in Science in Cybersecurity are awarded an NFQ Level 9 qualification can optionally complete the additional 30 credits required to upgrade their qualification to the MSc in Cybersecurity (Not included under Springboard+, additional fee would apply).

Academic Entry Requirements
A minimum of a level 8 primary degree in Computing or a cognate area with a 2.2 award or higher or equivalent on the National Qualifications Framework in Computing or a Cognate area. Candidates are expected to have programming ability. Cognate area means a STEM (Science, Technology, Engineering, and Mathematics) degree that also taught programming/application development related modules. An assessment and/or interview may be conducted to ascertain suitability if necessary for candidates who do not meet the normal academic requirements.

The college operates a Recognition of Prior Experiential Learning (RPEL) scheme meaning applicants who do not meet the normal academic requirements may be considered based on relevant work and other experience. This may be assessed using a portfolio of learning, demonstration of work produced, and an interview. The programming ability of the applicant will also be assessed. Non-English speaking applicants must demonstrate fluency in the English language as demonstrated by IELTS academic score of at least 6.0 or equivalent.

Laptop Requirements
Students are expected to successfully participate in lectures, laboratories and projects using a laptop computer with a substantial hardware configuration. A suitable configuration is 6GB of RAM (8GB or more are recommended); a 64- bit x86 processor (Intel i5 or superior); 250+ GB of hard disk; wifi card; and a recent installed release of Windows operating system. It is the

responsibility of the student to ensure their laptop is functioning correctly and that they have full administrator rights to the machine. NCI IT cannot provide support to personal devices.

This course requires internet access you will be required to ensure you have sufficient broadband speed and reliable connectivity from your place of study.

Free Laptop loan for eligible students on this course: Students who are eligible for HEA funding for this course may also be eligible for a free laptop provided on a loan basis for the duration of the programme. This will be a suitable specification machine for completion of the programme but must be returned once you have finished your course. Overall numbers of laptops available are subject to maximum numbers and no other alternatives can be offered.

Check *https://www.ncirl.ie/Students/ Student-Services/Support-Services/ Student-Laptop-Fund* for updates on the next opening date for applications.

Assessment
The programme is assessed by means of continuous, in-semester, assessment and final examination. http://courses.ncirl.ie. Please note that in some instances exams may take place in the daytime and at weekends.

Course Content
Classroom Delivery
(1 Year)

The course offers two specialisations: Forensics and Cloud Security. Learners must select one specialisation. Specialisations will only run due to student demand.

Semester 1
· Security Fundamentals
· IT Law and Ethics
· Network Security and
  Penetration Testing

Semester 2
· Secure Programming for Web
· Cryptography
· Malware Analysis
· Career Bridge

Semester 3
· Research in Computing
· Secure Programming for
  Application Development
· Cloud Security
  - Cloud Security Elective
· Incident Response
  and Analytics
  - Forensic Elective
· Forensics and eDiscovery

Electives will run subject to student demand.

Springboard Careers Advisors will proactively support you to find relevant employment during the course or following completion of the course.

*Note that all modules count towards the final award classification.