

## 資通安全碩士學位學程修課規定

111 學年度

|                                |   |             |            |              |            |            |            |            |            |              |            |               |              |
|--------------------------------|---|-------------|------------|--------------|------------|------------|------------|------------|------------|--------------|------------|---------------|--------------|
| 最低修業年限                         | 一般生為一至四年。   |             |            |              |            |            |            |            |            |              |            |               |              |
| 應修學分數                          | 除個別研究及論文研討課程之外，至少須修滿廿四學分。   |             |            |              |            |            |            |            |            |              |            |               |              |
| 應修（應選）課程<br>及符合畢業資格之<br>修課相關規定 | <p>應修課程<br/>資訊院論文研討(電機院電子專題研討或論文研討) (1學期)、資訊院個別研究(2學期，出國期間經指導教授同意除外)</p> <p>必選修專業課程(12 選 2)</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">*網路安全(3 學分)</td> <td style="width: 50%;">*消息理論(3學分)</td> </tr> <tr> <td>*網路程式設計(3學分)</td> <td>*密碼理論(3學分)</td> </tr> <tr> <td>*程式安全(3學分)</td> <td>*密碼工程(3學分)</td> </tr> <tr> <td>*軟體測試(3學分)</td> <td>*機器學習(3學分)</td> </tr> <tr> <td>*數位積體電路(3學分)</td> <td>*容錯計算(3學分)</td> </tr> <tr> <td>*量子訊息與計算(3學分)</td> <td>*行動網路安全(3學分)</td> </tr> </table> <p>選修專業課程<br/>如選修非電機院或資訊院開設之專業課程，須於選課加退選截止前填寫『選修專業課程認定申請表』，經指導教授同意並經學程主任認可後方得計入畢業學分，逾期者應於補繳後一個月內服義務工讀三小時。</p> | *網路安全(3 學分) | *消息理論(3學分) | *網路程式設計(3學分) | *密碼理論(3學分) | *程式安全(3學分) | *密碼工程(3學分) | *軟體測試(3學分) | *機器學習(3學分) | *數位積體電路(3學分) | *容錯計算(3學分) | *量子訊息與計算(3學分) | *行動網路安全(3學分) |
| *網路安全(3 學分)                    | *消息理論(3學分)  |             |            |              |            |            |            |            |            |              |            |               |              |
| *網路程式設計(3學分)                   | *密碼理論(3學分)  |             |            |              |            |            |            |            |            |              |            |               |              |
| *程式安全(3學分)                     | *密碼工程(3學分)  |             |            |              |            |            |            |            |            |              |            |               |              |
| *軟體測試(3學分)                     | *機器學習(3學分)  |             |            |              |            |            |            |            |            |              |            |               |              |
| *數位積體電路(3學分)                   | *容錯計算(3學分)  |             |            |              |            |            |            |            |            |              |            |               |              |
| *量子訊息與計算(3學分)                  | *行動網路安全(3學分)  |             |            |              |            |            |            |            |            |              |            |               |              |
| 備註                             | <ol style="list-style-type: none"> <li>1. 碩士生於入學第一學期結束前，至「臺灣學術倫理教育資源中心」平台修習「學術研究倫理教育課程」，並通過課程總測驗成績達及格標準。未通過總測驗之學生，不得申請學位考試。</li> <li>2. 碩士生入學後第一學期至本校網路教學平台修習「性別平等教育線上訓練課程」；因故未能完成者，須於畢業前補修完成，始得畢業。</li> <li>3. 畢業前須通過一門本院研究所開授或認可之英文授課專業課程。（註：研討類型之課程除外。）</li> <li>4. 每學期須選修「個別研究」課程，由碩士論文指導教授評分，以評定學生之研究水準，畢業前該課程至少須有二學期成績為通過。</li> <li>5. 其他未盡事宜，依據本學程「修業規章」辦理。</li> </ol>   |             |            |              |            |            |            |            |            |              |            |               |              |

# Graduate Program of Cyber Security

Academic Year 2022

|   |   |                      |                      |                       |                |                      |                            |                    |                    |                               |                            |                                       |                           |
|---|---|----------------------|----------------------|-----------------------|----------------|----------------------|----------------------------|--------------------|--------------------|-------------------------------|----------------------------|---------------------------------------|---------------------------|
| Minimum Term of Study   | One to four years for full-time students.   |                      |                      |                       |                |                      |                            |                    |                    |                               |                            |                                       |                           |
| Minimum Credits   | In addition to the courses of Individual Study and Seminars, students must complete 24 credits.   |                      |                      |                       |                |                      |                            |                    |                    |                               |                            |                                       |                           |
| Curriculum and Regulations  | <p>Required courses:</p> <ol style="list-style-type: none"> <li>1. Students must pass one ‘Seminar course’ or ‘Graduate Seminar’ before graduation.</li> <li>2. Students must pass at least one professional course taught in English given or approved by the college of Computer Science (hereinafter referred to as the College) at NYCU (Note: Except seminar courses.)</li> <li>3. Students must take ‘Individual Study’ every semester and be graded by the thesis advisor in order to evaluate the research ability. At least two semesters should be passed prior to graduation.</li> </ol> |                      |                      |                       |                |                      |                            |                    |                    |                               |                            |                                       |                           |
|   | Major courses ( <u>2</u> out of the <u>12</u> selections below):  |                      |                      |                       |                |                      |                            |                    |                    |                               |                            |                                       |                           |
|   | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">* Network Security</td> <td style="width: 50%;">* Information Theory</td> </tr> <tr> <td>* Network Programming</td> <td>* Cryptography</td> </tr> <tr> <td>* Secure Programming</td> <td>* Cryptography Engineering</td> </tr> <tr> <td>* Software Testing</td> <td>* Machine Learning</td> </tr> <tr> <td>* Digital Integrated Circuits</td> <td>* Fault Tolerant Computing</td> </tr> <tr> <td>* Quantum Information and Computation</td> <td>* Mobile Network Security</td> </tr> </table>                               | * Network Security   | * Information Theory | * Network Programming | * Cryptography | * Secure Programming | * Cryptography Engineering | * Software Testing | * Machine Learning | * Digital Integrated Circuits | * Fault Tolerant Computing | * Quantum Information and Computation | * Mobile Network Security |
|   | * Network Security  | * Information Theory |                      |                       |                |                      |                            |                    |                    |                               |                            |                                       |                           |
|   | * Network Programming   | * Cryptography       |                      |                       |                |                      |                            |                    |                    |                               |                            |                                       |                           |
| * Secure Programming  | * Cryptography Engineering  |                      |                      |                       |                |                      |                            |                    |                    |                               |                            |                                       |                           |
| * Software Testing  | * Machine Learning  |                      |                      |                       |                |                      |                            |                    |                    |                               |                            |                                       |                           |
| * Digital Integrated Circuits   | * Fault Tolerant Computing  |                      |                      |                       |                |                      |                            |                    |                    |                               |                            |                                       |                           |
| * Quantum Information and Computation   | * Mobile Network Security   |                      |                      |                       |                |                      |                            |                    |                    |                               |                            |                                       |                           |
| <p>Elective courses:</p> <p>Students can take technical courses offered by the College of Computer Science or the College of Electrical and Computer Engineering as elective courses. For the technical courses offered by the other colleges, students must seek approvals from the thesis advisor and the director of the cybersecurity program by submitting the “Request for Non-EECS Elective Courses” before the course registration deadline. Requests made past the course registration deadline will not be processed until the student completes three hours of volunteer duty at the CS offices.</p> |   |                      |                      |                       |                |                      |                            |                    |                    |                               |                            |                                       |                           |
| Note  | <ol style="list-style-type: none"> <li>1. Students should register in the course of “Academic Research Ethics Education” during their first semester. Students who don’t pass the final assessment of the course can’t apply for their degree exam.</li> <li>2. Students should take “Gender Equity Education Online Training Course” through the University’s online learning platform during their first semester. Students who don’t pass the course for some reason must complete it before graduation.</li> </ol>  |                      |                      |                       |                |                      |                            |                    |                    |                               |                            |                                       |                           |

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|  | 3. Matters not covered by this contract shall be settled will be executed in accordance with the “Regulations on Academic Studies for Master Program Students” for the Graduate Program of Cyber Security. |
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