

**Tamkang University Department of Physics Curriculum Plan**  
(Required Courses for New Students Admitted in the Academic Year 113)

| 科 目 名 稱<br>C o u r s e t i t l e |                                                                       | 學<br>分<br>數 | Y e a r<br>1 |     | Y e a r<br>2 |    | Y e a r<br>3 |     | Y e a r<br>4 |     | 備 註<br>Notes                                                               |                     |
|----------------------------------|-----------------------------------------------------------------------|-------------|--------------|-----|--------------|----|--------------|-----|--------------|-----|----------------------------------------------------------------------------|---------------------|
|                                  |                                                                       |             | 1st          | 2nd | 1st          | 2n | 1st          | 2nd | 1st          | 2nd |                                                                            |                     |
| General Education 26 Credits     |                                                                       |             |              |     |              |    |              |     |              |     |                                                                            |                     |
| 基本<br>知能<br>課程<br>12<br>學分       | 外國語文學門(Q)<br>Foreign Languages and Drills                             | 8           | 2            | 2   | 2            | 2  |              |     |              |     | 大 1 英文必修、大 2 外文<br>自由選<br>English is required for<br>freshmen.             |                     |
|                                  | 中國語文能力表達<br>Capability of expressing<br>chinese in spoken and written | 2           |              |     |              |    |              |     |              |     | 語文表達<br>Language Expression                                                |                     |
|                                  | 大學學習<br>Learning in<br>University                                     | 1           | 1            |     |              |    |              |     |              |     | 學習與發展學門(N)<br>Learning and Development                                     |                     |
|                                  | 社團學習與實作<br>Extracurricular activities<br>and team development         | 1           |              | 1   |              |    |              |     |              |     | 課外活動與團隊發展(K)<br>Learning and practice of<br>clubs:an<br>Introduction       |                     |
| 識核<br>心<br>程<br>12<br>學分         | AI 與程式語言<br>AI & Programming Language                                 | 1           | 1            |     |              |    |              |     |              |     |                                                                            |                     |
|                                  | 探索永續<br>Exploring Sustainability                                      | 1           | 1            |     |              |    |              |     |              |     |                                                                            |                     |
|                                  | 文學經典學門(L)<br>Classics In World Literature                             | 2           |              |     |              |    |              |     |              |     | 人文領域<br>至少 2 學<br>分<br>2 credits<br>required (1<br>out of 4<br>categories) | 每學門至多修習<br>2 科 4 學分 |
|                                  | 歷史與文化學門(P)<br>History And Cultures                                    | 2           |              |     |              |    |              |     |              |     |                                                                            |                     |
|                                  | 哲學與宗教學門(V)<br>Philosophy and Religion                                 | 2           |              |     |              |    |              |     |              |     |                                                                            |                     |
|                                  | 藝術欣賞與創作學門(m)<br>Art appreciation and invetion                         | 2           |              |     |              |    |              |     |              |     |                                                                            |                     |
|                                  | 全球視野學門(t)<br>Global outlook                                           | 2           |              |     |              |    |              |     |              |     | 社會領域<br>至少 2 學<br>分<br>2 credits<br>required (1<br>out of 4<br>categories) |                     |
|                                  | 未來學學門(r)<br>Futures studies                                           | 2           |              |     |              |    |              |     |              |     |                                                                            |                     |
|                                  | 社會分析學門(w)<br>Social analysis                                          | 2           |              |     |              |    |              |     |              |     |                                                                            |                     |
|                                  | 公民社會及參與學門(S)<br>Civil Society And Participation                       | 2           |              |     |              |    |              |     |              |     |                                                                            |                     |
|                                  | 資訊教育學門(O)<br>Information & Computer<br>Education                      | 2           |              |     |              |    |              |     |              |     | 科學領域<br>至少 2 學<br>分<br>2 credits<br>required (1<br>out of 4<br>categories) |                     |
|                                  | 全球科技革命學門(z)<br>Global technology revolution                           | 2           |              |     |              |    |              |     |              |     |                                                                            |                     |
|                                  | 自然科學學門(u)<br>Natural sciences                                         | 2           |              |     |              |    |              |     |              |     |                                                                            |                     |

每學門至多修習  
2 科 4 學分

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|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------|--------------|-----|--------------|-----|--------------|-----|--------------|-----|-------------------------------------------------|
|                                                                    |                                                                                                           |             | 1st          | 2nd | 1st          | 2nd | 1st          | 2nd | 1st          | 2nd |                                                 |
| 其他<br>課程                                                           | 體育<br>Physical education                                                                                  | 4           | 1            | 1   | 1            | 1   |              |     |              |     | *Not counted toward<br>graduation credits*      |
|                                                                    | 全民國防教育軍事訓練<br>(一)-國防科技<br>All-Out Defense Education<br>Military Training(I)-National<br>Defense Technolog | 0           |              |     |              |     |              |     |              |     | 0 credit, offered in Year 1<br>for one semester |
|                                                                    | 校園與社區服務學習<br>Learning campus and community<br>srevicees                                                   | 2           | 1            | 1   |              |     |              |     |              |     |                                                 |
| Physics Department Required Course 63 Credits                      |                                                                                                           |             |              |     |              |     |              |     |              |     |                                                 |
| 普通化學<br>General chemistry                                          |                                                                                                           | 3           | 3            |     |              |     |              |     |              |     |                                                 |
| 普通化學實驗<br>General chemistry lab.                                   |                                                                                                           | 1           | 1            |     |              |     |              |     |              |     | 實驗課程                                            |
| 普通物理<br>General Physics                                            |                                                                                                           | 8           | 4            | 4   |              |     |              |     |              |     |                                                 |
| 普通物理實驗<br>General physics lab.                                     |                                                                                                           | 2           | 1            | 1   |              |     |              |     |              |     | 實驗課程                                            |
| 微積分<br>Calculus                                                    |                                                                                                           | 6           | 3            | 3   |              |     |              |     |              |     |                                                 |
| 基礎物理數學<br>Fundamental mathematical physics                         |                                                                                                           | 2           |              | 2   |              |     |              |     |              |     |                                                 |
| 計算機概論<br>Introduction to computers                                 |                                                                                                           | 3           |              | 3   |              |     |              |     |              |     |                                                 |
| 電磁學<br>Electromagnetism                                            |                                                                                                           | 6           |              |     | 3            | 3   |              |     |              |     |                                                 |
| 物理數學<br>Mathematical physics                                       |                                                                                                           | 3           |              |     | 3            |     |              |     |              |     |                                                 |
| 電磁學實驗<br>Electromagnetic physics lab.                              |                                                                                                           | 2           |              |     | 1            | 1   |              |     |              |     | 實驗課程                                            |
| 力學<br>Mechanics                                                    |                                                                                                           | 3           |              |     |              | 3   |              |     |              |     |                                                 |
| AI 數值方法(一)<br>Numerical Methods and Artificial<br>Intelligence (I) |                                                                                                           | 2           |              |     | 2            |     |              |     |              |     |                                                 |
| 專題研究<br>Research seminar                                           |                                                                                                           | 2           |              |     |              | 1   | 1            |     |              |     | 專題課程                                            |
| 量子物理<br>Quantum physics                                            |                                                                                                           | 6           |              |     |              |     | 3            | 3   |              |     |                                                 |

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|----------------------------------|-------------|--------------|-----|--------------|----|--------------|-----|--------------|-----|--------------|
|                                  |             | 1st          | 2nd | 1st          | 2n | 1st          | 2nd | 1st          | 2nd |              |
| 熱力學<br>Thermodynamics            | 3           |              |     |              |    |              | 3   |              |     |              |
| 光學<br>Optics                     | 3           |              |     |              |    | 3            |     |              |     |              |
| 光學實驗<br>Optics lab.              | 1           |              |     |              |    |              | 1   |              |     | 實驗課程         |
| 電子學<br>Electronics               | 3           |              |     |              |    | 3            |     |              |     |              |
| 電子學實驗<br>Electronics lab.        | 2           |              |     |              |    | 1            | 1   |              |     | 實驗課程         |
| 近代物理實驗<br>Modern physics lab     | 2           |              |     |              |    |              |     | 1            | 1   | 實驗課程         |
|                                  |             |              |     |              |    |              |     |              |     |              |
|                                  |             |              |     |              |    |              |     |              |     |              |

(1) Required credits (including general education 26credits) : 89credits

(2) Minimum departmental elective credits : 19 credits

(3) Free elective credits : 22 credits

Total credits for graduation : 128 credits