國立屏東科技大學 動物用疫苗國際學位專班 博士班課程規劃表(109學年度)

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| --- | --- | --- | --- |
| 學年 | 第一學年 | 第二學年 | 學分小計 |
| 學期 | 第一學期 | 第二學期 | 第一學期 | 第二學期 |
| 類別 | 科目 | 永久碼 | 學分/時數 | 科目 | 永久碼 | 學分/時數 | 科目 | 永久碼 | 學分/時數 | 科目 | 永久碼 | 學分/時數 |
| 必修 | 專題討論 | 30039 | 1/2 | 專題討論 | 30039 | 1/2 | 專題討論博士論文 | 3003930048 | 1/212/12 | 專題討論 | 30039 | 1/2 |  |
| 小計 |  |  | 1/2 |  |  | 1/2 |  |  | 13/14 |  |  | 1/2 | 16 |
| 選修 | 傳染病之致病機制酵素與蛋白質工程學進階免疫學專題研究(1)疫苗學期刊論文寫作與投稿疫苗應用生物資訊學動物細胞培養疫苗生產技術 | 4089555119301734071720493305463072130722 | 3/32/22/22/22/22/22/22/2 | 進階反芻獸疫苗開發進階豬用疫苗開發進階魚用疫苗開發專題研究(2)佐劑學生物技術與生技產業動物疫苗製程特論疫苗免疫學儀器分析與操作進階生物技術與生技產業 | 55213305015520240718203182018423384404842343623437 | 2/22/22/22/22/22/22/22/22/23/3 | 免疫評估技術疫苗工程學專題研究(3)動物疫苗製程實習進階禽類疫苗開發進階寵物疫苗開發動物用疫苗檢驗標準及技術生物安全與防疫系統 | 4028720492301853054523278232793071930205 | 2/22/22/21/22/22/22/23/3 | 產業實務疫苗研發海外實務專題研究(4)生物性佐劑疫苗蛋白質結構分析及模擬 | 3020530500301862343830833 | 2/22/22/22/23/3 |  |
| 小計 |  | 17/17 |  | 21/21 |  | 16/17 |  | 11/11 | 65 |

備註：學生畢業總修習學分數33學分 (16學分必修課程、17學分選修課程)

International Ph.D program in Animal Vaccine Technology

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| --- | --- | --- | --- |
| Academic Year | First Year | Second Year | CreditSubtotal |
| Term | First Term | Second Term | First Term | Second Term |
| Category | subject | Credit/time | subject | Credit/time | subject | Credit/time | subject | Credit/time |
| Required Course | Seminar | 1/2 | Seminar | 1/2 | SeminarDissertation | 1/212/12 | Seminar | 1/2 |  |
| Subtotal |  | 1/2 |  | 1/2 |  | 13/14 |  | 1/2 | 16 |
| Selective Course | **Pathogenesis of Infectious Diseases**Enzyme and Protein Engineering**Advance Immunology**Special Research Project (1)**Vaccinology**Manuscript Preparation and Submission**Bioinformatics in Vaccine Development**Animal Cell Culture for Vaccine Production | **3/3**2/2**2/2**2/2**2/2**2/2**2/2**2/2 | **Advanced Ruminant Vaccine Development**Advanced Porcine Vaccine Development**Advanced Fish Vaccines Development**Special Research Project (2)**Adjuvants**Biotechnology and Bioindustry**Advance Animal Vaccine Production**Immunology of Vaccine**Instrumental Analysis and Operation**Advance Biotechnology and Bioindustry | **2/2**2/2**2/2**2/2**2/2**2/2**2/2**2/2**2/2**3/3 | **Immunoevaluation Techniques**Vaccine Engineering**Special Research Project (3)**Practical in Vaccine Production**Advanced Avian Vaccine Development**Advanced Companion Animal Vaccine Development**Animal Vaccine Testing Standards and Techniques**Biosecurity and Epidemic Prevention System | **2/2**2/2**2/2**1/2**2/2**2/2**2/2**3/3 | **Industry Internship**Overseas Internship in Vaccine Research**Special Research Project (4)**Biological Adjuvants**Protein Structure Analysis and Modeling for Vaccine** | **2/2**2/2**2/2**2/2**3/3/** |  |
| Subtotal |  | 17/17 |  | 21/21 |  | 16/17 |  | 11/11 | 65 |

PS：1.Students must have 33 credits for graduation (16 in required courses and 17 in electives)