**碩士班 動物疫苗科技研究所**

(一)教育目標

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| 本所教學著重於動物疫苗研發、製造與行銷相關課程，以疫苗學、佐劑學及疫苗工程學為專業必修課程，輔以其他基礎及實用課程。培育具備敬業態度、社會責任、與國際觀之動物疫苗科技產業專業優秀人才，落實動物疫苗科技在產業上的研發與應用。 |

(二)必修科目

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| 文 　科 　目 　名 　稱  中英 | 學  分  數 | 第一學年 | | 第二學年 | | 備註 |
| 上 | 下 | 上 | 下 |
| 專題討論  Seminar | 4 | 1 | 1 | 1 | 1 |  |
| 動物疫苗研究法  Methods for Animal Vaccine Research | 2 | 1 | 1 |  |  |  |
| 疫苗學  Vaccinology | 2 | 2 |  |  |  |  |
| 佐劑學  Adjuvants | 2 |  | 2 |  |  |  |
| 疫苗工程學  Vaccine Engineering | 2 |  |  | 2 |  |  |
| 碩士論文  Thesis | 6 |  |  | 3 | 3 |  |
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| 合計 | 18 | 4 | 4 | 6 | 4 |  |

（三）選修科目

| 文 　科 　目 　名 　稱  中英 | 學  分  數 | 第一學年 | | 第二學年 | | 備註 |
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| 上 | 下 | 上 | 下 |
| 傳染病之致病機制  Pathogenesis of Infectious Diseases | 3 | 3 |  |  |  |  |
| 細胞分子免疫學  Cellular and Molecular Immunology | 2 | 2 |  |  |  |  |
| 分子診斷技術學  Molecular-based Diagnostic Techniques | 2 | 2 |  |  |  |  |
| 分子生物學  Molecular Biology | 3 | 3 |  |  |  |  |
| 酵素與蛋白質工程學  Enzyme and Protein Engineering | 2 | 2 |  |  |  |  |
| 生物資訊學  Bioinformatics | 2 | 2 |  |  |  |  |
| 生物技術與生技產業  Biotechnology and Bioindustry | 3 | 3 |  |  |  |  |
| 基礎免疫學  Essential Immunology | 3 | 3 |  |  |  |  |
| 微生物學特論  The Special Topic of Microbiology | 3 | 3 |  |  |  |  |
| 免疫原結構基因學與表達技術  Immunogenic Structural Genes and Expression Techniques | 2 | 2 |  |  |  |  |
| 應用基因體學  Applied Genomics | 2 | 2 |  |  |  |  |
| 疫苗佐劑學  Vaccine Adjunvats | 2 | 2 |  |  |  |  |
| 進階免疫學  Advance Immunology | 2 | 2 |  |  |  |  |
| 傳染病免疫機轉  The Mechanisms of Host Immunity to Infectious Diseases | 3 |  | 3 |  |  |  |
| 基因調控  Gene Regulation | 2 |  | 2 |  |  |  |
| 生物統計學特論  Special Topics on Biometry | 2 |  | 2 |  |  |  |
| 動物試驗技術  Techniques in Lab Animal | 2 |  | 2 |  |  |  |
| 臨床免疫學  Clinical Immunology | 2 |  | 2 |  |  |  |
| 疫苗製程特論  Advance Vaccine Manufacture Operation | 2 |  | 2 |  |  |  |
| 疫苗免疫學  Immunology of Vaccine | 2 |  | 2 |  |  |  |
| 免疫功能技術評估  Immunological Evaluation Techniques | 2 |  | 2 |  |  | 免疫科技應用學程 |
| 免疫功能技術評估實習  Practice of Immunological Evaluation Techniques | 1 |  | 1 |  |  | 免疫科技應用學程 |
| 英文學術演講  Academic Presentation in English | 2 |  | 2 |  |  |  |
| 生物製劑檢驗技術  Inspection Techniques on Biological Products | 2 |  |  | 2 |  |  |
| 疫苗市場行銷學  Vaccine Marketing | 2 |  |  | 2 |  |  |
| 實驗動物學特論  Advanced Laboratory Animal Science | 2 |  |  | 2 |  |  |
| 動物用藥品管理法規  Animal Pharmaceutical Products Jurisprudence | 2 |  |  | 2 |  |  |
| 免疫評估技術  Immunoevaluation Techniques | 2 |  |  | 2 |  |  |
| 應用蛋白質體學  Applied Proteomics | 2 |  |  | 2 |  |  |
| 免疫基因與生物資訊概論  Introduction to Immunogenic Genes and Bioinformatics | 2 |  |  | 2 |  | 免疫科技應用學程 |
| 免疫科技與產業應用  Immunological Technologies and Industrial Applications | 3 |  |  | 3 |  | 免疫科技應用學程 |
| 營養免疫學  Nutritional Immunology | 2 |  |  | 2 |  | 免疫科技應用學程 |
| 疫苗製程特論實習  Practical in Vaccine Production | 1 |  |  | 1 |  |  |
| 免疫基因與生物資訊實習  Pratical in Bioinformatics | 1 |  |  | 1 |  |  |
| 產業實務  Industry Internship | 2 |  |  |  | 2 |  |
| 傳染病分子醫學與疫苗研發海外實習  Vaccine and Drug Research for Infectious Diseases | 2 |  |  |  | 2 |  |
| 專題研究(1)~(4)  Special Topics(1)~(4) | 4 | 1 | 1 | 1 | 1 |  |
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| 合計 | 80 | 32 | 21 | 22 | 5 |  |