**M102 block 1課表**

**單元 一：基礎醫學導論**

**Block 1 : Basic Science and Introduction of Medicine**

 By 張玲麗 (2017-8-30)

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* **學習目標**
* 基礎與臨床整合課程之施行目的與整體性的介紹。
* 使學生瞭解各個Block的教學目標、特色及課程評估方式與標準。
* 介紹網路教學系統：E-learning之使用與如何進行網路資料搜尋。
* 介紹團隊導向學習 (team-based learning, TBL) 施行方式與師生所應扮演的角色，並實際操作。
* 胚胎學、生理學、微生物免疫學、寄生蟲學、病理學、藥理學、公共衛生學、實驗診斷學、及實證醫學等基礎、臨床醫學相關課程概念之傳授，為日後基礎臨床醫學課程奠定基礎。
* **Learning objectives**
* Introduce the basic and clinical medicine classes.
* Understand the principles, character, connection of sixteen blocks and the criteria used to judge the students’ learning score.
* Introduction to E-learning system: How to use? How to search?
* To know the role of students, tutors in learning by team-based learning (TBL) and practice.
* Gain and lay the foundation of basic, clinical knowledge including embryology, physiology, microbiology & immunology, parasitology, pathology, pharmacology, public health, laboratory diagnosis and evidence-based medicine
* **Syllabus**

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| **A. Lecture - Basic Science：87hrs + 4hrs (導論)** |
| Introduction (導論) | 4 hrs |
| Embryology (胚胎學) | 8 hrs |
| Physiology (生理學) | 15 hrs |
| Microbiology & immunology (微生物 & 免疫學) | 16 hrs |
| Parasitology (寄生蟲學)  | 3 hrs |
| Pathology (病理學) | 18 hrs |
| Pharmacology (藥理學) | 22 hrs |
| Public Health (公共衛生學) | 2 hrs |
| Cell biology (細胞生物學) | 3 hrs |
| **B. Lecture – Clinical Science：4 hrs** |
| Laboratory diagnosis (實驗診斷學) | 2 hrs |
|  evidence-based medicine (實證醫學) | 2 hrs |
| **C. Others: 13 hrs** |
| Problem-based learning (PBL) | 0 hrs |
| Team-based based learning (TBL) | 4 hrs |
| Clinical Skills | 0 hrs |
| 專業素養 | 4 hrs |
| Test | 4 hrs |
| Feedback | 1 hrs |
| **Total: 108 hrs** |

* **必備書籍**

| 書名 | 作者 | 版本/年份/出版商 |
| --- | --- | --- |
| 胚胎學 |  |  |
| The Developing Human | K.L. Moore & T.V.N. Persaud | 10th ed, 2015, Saunders |
| 生理學 |  |  |
| Ganong’s Review of Medical Physicology ,  | Kim E. Barrett, Susan M. Barman, Scott Boitano, | Heddwen L. Brooks. McGraw Hill, 24 eds, 2012. |
| Vander’s Human Physiology：the mechanisms of body function,  | Eric. P. Widmaier, Hershel Raff, Kevin T. Strang. | McGram-Hill, 13 eds, 2014. |
| Guyton and Hall Textbook of Medical Physiology | John E. Hall | 13th ed. / 2016 / Elsevier |
| 微生物免疫學 |  |  |
| Medical Microbiology | Murray PR et al | 7 th ed, 2013 Mosby |
| Immunobiology | Janeway, Travers, Walport, and Shlomchik | 8th ed, 2012 Churchill |
| 病理學 |  |  |
| Pathologic Basis of Disease | Robbins and Cotran | 9th ed, 2015, ELSEVIER Saunders Company |
| 藥理學 |  |  |
| Basic & Clinical Pharmacology | Bertram G. Katzung | 13th ed, 2015, McGraw-Hill |
| 寄生蟲學 |  |  |
| Medical Parasitology | Markell, John and Krotoski | 8 thedition |

* **參考書籍**

| 書名 | 作者 | 版本/年份/出版商 |
| --- | --- | --- |
| 生理學 |  |  |
| Text book of Medical Physiology | Guyton and Hall | 11th ed, 2006 W.B. Saunders Company |
| Textbook of Medical Physiology with STUDENT CONSULT access | Arthur C. Guyton and John E. Hall | 11th ed, 2005ELSEVIER Saunders |
| Pathophysiology of Disease: A introduction to clinical medicine | Stephen J. McPhee, Vishwanath R. Lingappa and William F. Ganong | 6th ed, 2006 McGraw Hill |
| Human Physiology | Stuart Ira Fox | 8th ed, 2004 McGraw Hill |
| 微生物免疫學 |  |  |
|  |  |  |
| Immunology  | Male, Brostoff, Roth, and Roitt | 8th ed, 2013 |
|  |  |  |
| 藥理學 |  |  |
| The Pharmacological Basis of Therapeutics  | Joel G. Hardman and Lee E. Limbird  | 12th ed, 2012McGraw Hill |
| Pharmacotherapy Casebook: A Patient-Focused Approach | Terry L. Schwinghammer, *Editor*, Julia M. Koehler | 9th ed, 2014 McGraw Hill |
| Pharmacotherapy: A pathophysiologic Approach  | Joseph T. Dipiro, Robert L. Talbert, Gary C. Yee, Gary R. Matzke, Barbara G. Wells, andL. Michael Posey | 9th ed, 2014 McGraw Hill |
| 寄生蟲學 |  |  |
| Basic clinical Parasitology | FA Neva and HW Brown | 6thedition |
| Foundations of Parasitology  | GD Schmidt and LS Roberts | 7thedition |

**1st week（21 hrs）上課教室：A2**

| **課程大綱** | **上課時數** | **授課科目** | **授課老師** |
| --- | --- | --- | --- |
| **9/11 W1(2)** | 總課程導引（一）：1.介紹醫學系3、4年級基礎臨床整合課程之起源、教學目標、16個Block之內容介紹。2.各個Block之實施方式與成績評定方式。3. iKMU app之教師評量與IRS 介紹。General Introduction I:1. Introduce the principles and character of fifteen blockers in basic and clinical medicine classes to 3 and 4 degree of undergraduate.2. Let student understand the practice and evaluation of fifteen blocks.3. Introduce how to use IRS. | 1 | 醫學導論Medicalintroduction | 戴任恭徐仲豪 |
| **9/11****W1(3)** | 總課程導引（四）：自我學習與網路學習資源。 E-learning系統之介紹。General Introduction III:1. How to search from the net source
2. Introduce the E-learning system
 | 1 | 醫學導論Medical introduction | 張維容陳嫚翎 |
| **9/11****W1(4)** |  Block 1 課程導引Introduction to Block 1(block 1課程介紹及成績評定) | 1 | 醫學導論Medicalintroduction | 張玲麗 |
| **9/11****W1(5-6)** | 生理學之介紹Introduction of physiology | 2 | 生理學Physiology | 何美泠 |
| **9/11****W1(7-8)** | 藥理學總論general pharmacology | 2 | 藥理學Pharmacology | 洪秀貞 |
| **9/12****W2(2)** | 總課程導引（三）：團隊導向學習 (TBL) 之簡介Introduction of team-based learning | 1 | 醫學導論Medical introduction | 蔡克勵 |
| **9/12****W2(6-7)** | 胚胎學簡介 Introduction of embryology | 2 | 胚胎學Embryology | 李怡琛 |
| **9/13****W3(3-4)** | 細胞生理學 (I)：細胞訊息與存活Cellular physiology (I): Cellular signalling and cell survival | 2 | 生理學Physiology | 蔡克勵 |
| **9/14****W4(3-4)** | 細胞生理學 (II)：細胞膜運輸Cellular physiology (II): Cell membrane transport | 2 | 生理學Physiology | 蔡克勵 |
| **9/14****W4(6-8)** | 微生物及免疫學介紹 & 細菌總論Introduction & Overview of bacteria | 3 | 微生物免疫學Microbio-immunology | 張玲麗 |
| **9/15****W5(2-3)** |  免疫總論 Overview of Immunology | 2 | 微生物免疫學Microbio-immunology  | 陳怡菁 |
| **9/15****W5(5-6)** | 體液免疫反應Humoral immune responses | 2 | 微生物免疫學Microbio-immunology  | 陳怡菁 |
| **Total** | 17 hrs +4 hrs (導論) |

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| **2 st week（19 hrs）上課教室：A2** |
| **課程大綱** | **上課時數** | **授課科目** | **授課老師** |
| **9/18****W1(3-4)** | 藥物基因體學Pharmacogenomic | 2 | 藥理學Pharmacology | 洪秀貞 |
| **9/18****W1(5-7)** | 寄生蟲學總論Overview of parasitology | 3 | 寄生蟲學Parasitology | 顏全敏 |
| **9/19****W2(2-4)** | 病理學概論Introduction of pathology  | 3 | 病理學Pathology | 楊曉芳 |
| **9/19****W2(6)** | B細胞的產生與分化B cell generation and differentiation | 1 | 微生物免疫學Microbio-immunology  | 陳怡菁 |
| **9/19****W2(7)** | T細胞的產生與分化T cell generation and differentiation | 1 | 微生物免疫學Microbio-immunology  | 陳怡菁 |
| **9/20****W3(6-7)** | 細胞生理學(III) : 細胞膜電位調控與生物能量學Cellular physiology (III): Control of membrane potential and bioenergetics | 2 | 生理學Physiology | 蔡克勵 |
| **9/21****W4(3-4)** | 醫學專業素養的社會學背景Sociological background of medical professionalism | 2 | 醫學專業素養Medical professionalism | 林育志 |
| **9/21****W4(6-7)** | 藥物動力學Pharmacokinetics | 2 | 藥理學Pharmacology | 洪秀貞 |
| **9/22****W5(2)** | 抗原呈現Antigen presentation  | 1 | 微生物免疫學Microbio-immunology | 孫昭玲 |
| **9/22****W5(3-4)** | 淋巴球的活化與調節Lymphocyte activation and regulation  | 2 | 微生物免疫學Microbio-immunology | 孫昭玲 |
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| **Total** | 17 hrs + 2hrs (專業素養) |  |  |  |
| **3rd week（14 hrs）上課教室：A2** |
|  | **課程大綱** | **上課時數** | **授課科目** | **授課老師** |
| **9/25****W1(3-4)** | 突觸傳遞synaptic transmission | 2 | 生理學Physiology | 黃烱瑋 |
| **9/25****W1(5-6)** | 骨骼肌生理學Physiology of skeletal muscle | 2 | 生理學Physiology | 陳贊如 |
| **9/26****W2(3-4)** | 團隊導向學習 (TBL) (I)Team-based learning (I)  | 2 | 團隊導向學習Team-based learning | 張玲麗 陳怡菁 孫昭玲 |
| **9/27****W3(2-3)** |  心肌與平滑肌生理學 Physiology of myocardium and smooth muscle | 2 | 生理學Physiology | 蔡克勵 |
| **9/27****W3(4)** | 細胞生理學(IV) : 細胞酸鹼調控 Cellular physiology (IV): Regulation of cellular acid-base balance  | 1 | 生理學Physiology | 蔡克勵 |
| **9/27****W3(5-6)** | 胚盤及胚層的形成 Formation of embryonic disc and germ layers | 2 | 胚胎學Embryology | 李怡琛 |
| **9/28****W4(2-4)** | 細胞適應、細胞受傷與細胞死亡Cellular cellular adaptations, cell injury, and cell death | 3 | 病理學Pathology | 連培因 |
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| **Total** | 14 hrs |

**4 th week（15 hrs）上課教室：A2**

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|  | **課程大綱** | **上課時數** | **授課科目** | **授課老師** |
| **10/2****W1(3-4)** | 期中考 | 2 |  | 張玲麗 |
| **10/2****W1(6-8)** | 炎症與修復病理學 Inflammation and repair | 3 | 病理學Pathology | 尹莘玲 |
| **10/3****W2(3-4)** | 自主神經藥理概論 Introduction to autonomic pharmacology | 2 | 藥理學Pharmacology | 楊玉嬌 |
| **10/3****W2(6-8)** | 細胞受損、炎症病理學實驗 (504 & 505 教室)Pathology lab | 3 | 病理學實驗Pathology laboratory | 陳怡庭 |
| **10/4****W3** | 中秋節放假 |  |  |  |
| **10/5****W4(2)** | 細胞激素Cytokine  | 1 | 微生物免疫學Microbio-immunology | 孫昭玲 |
| **10/5****W4(3-4)** | 體腔、系膜及橫膈的形成 Body cavities, mesenteries and diaphragm | 2 | 胚胎學Embryology | 李怡琛 |
| **10/6****W5 (3)** |  免疫耐受性 Immune tolerance  | 1 | 微生物及免疫學Micro-immunology | 孫昭玲 |
| **10/6****W5(4)** | 黴菌總論Overview of fungus | 1 | 微生物免疫學Microbio-immunology | 張仲羽 |
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| **Total** | 13 hrs + 2 hrs (考試) |

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| **5 st week（20 hrs）上課教室：A2** |
|  | **課程大綱** | **上課時數** | **授課科目** | **授課老師** |
| **10/9****W1** | 放假 |  |  |  |
| **10/10 W2** |  雙十節放假 |  |  |  |
| **10/11****W3(1-2)** | 臨床檢驗判讀原則 Interpretation of laboratory data | 2 | 實驗診斷學Laboratory medicine | 陳百薰 |
| **10/11****W3(3-4)** | 器官形成、胎盤及胚膜 Organogenesis, the placenta and fetal membranes | 2 | 胚胎學Embryology | 李怡琛 |
| **10/11****W3(5)** |  滅菌與消毒 Sterilization & disinfection | 1 | 微生物暨免疫學(Microbiology & Immunology) | 陳怡菁 |
| **10/11****W3(6-7)** | 團隊導向學習 (TBL) (II)Team-based learning (II)  | 2 | 團隊導向學習Team-based learning | 蔡克勵 |
| **10/12****W4(3-4)** | 角色理論：了解自己的角色組與角色期待Role theory：the role-set and role expectation  | 2 | 醫學專業素養Medical professionalism | 林育志 |
| **10/12****W4(5-8)** | 1. 擬腎上腺素作用劑

Adrenergic drugs 1. 抗腎上腺素作用劑

Adrenergic blocking agents  | 4 | 藥理學Pharmacology | 吳炳男 |
| **10/13****W5(1-2)** | 1. 擬膽鹼性作用劑

 Cholinergic drugs 2.抗膽鹼性作用劑  Cholinergic blocking agents 第一堂 | 2 | 藥理學Pharmacology | 楊玉嬌 |
| **10/13****W5(3-4)** | 全球衛生 Global health | 2 | 公共衛生學Public health | 莊弘毅 |
| **10/13****W5(5-7)** | 細胞癌化Biology of cells & cell carcinogenesis | 3 | 醫學研究所 | 林常申 |
|  |  |  |  |  |
| **Total** | 18 hrs + 2hrs (專業素養) |

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| **6 st week（19 hrs）上課教室：A2** |
|  | **課程大綱** | **上課時數** | **授課科目** | **授課老師** |
| **10/16****W1** | 校慶停課一天 |  |  |  |
| **10/17****W2(2-4)** | 腫瘤病理學概論Introduction to tumor pathology | 3 | 病理學Pathology | 尹莘玲 |
| **10/17****W2(6-8)** | 基礎腫瘤病理學實驗 (504 & 505 教室)Pathology lab | 3 | 病理學Pathology | 韋又菁 |
| **10/18****W3(1-2)** | 1. 擬膽鹼性作用劑

 Cholinergic drugs 2.抗膽鹼性作用劑  Cholinergic blocking agents 第二堂 | 2 | 藥理學Pharmacology | 楊玉嬌 |
| **10/18****W3(3-4)** | 1. 神經肌肉阻斷劑

Neuromuscular blocking agents 1. 神經節阻斷劑

Ganglionic blocking agents  | 2 | 藥理學Pharmacology | 楊玉嬌 |
| **10/18****W3(7-8)** | 1.自泌素 (Autacoids) (I): Prostaglandins,Thromboxanes Leukotrienes & Related Compounds  |  2 |  藥理學Phamacology |  吳炳男 |
| **10/19****W4(1-2)** | 實證醫學概念Concepts of evidence-based medicine | 2 | 實證醫學Evidence-based medicine | 李智雄 |
| **10/19****W4(3-4)** | 2.自泌素 (Autacoids)(II): Histamine, Serotonin & the Ergot Alkaloids  | 2 | 藥理學Phamacology | 葉竹來 |
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|  |  |  |  |  |
| **10/23****W1** | 期末考Final exam | 2 |  | 張玲麗 |
| **10/****W** | 學習評量與回饋Evaluation and feedback of learning | 1 | 醫學導論Medical introduction | 全體教師 |
| **Total** | 16 hrs + 2hrs (考試) + 1hr (回饋) |
|  |  |  |  |  |
| **週數** | **時數** |
| **1st week** | **21** |
| **2nd week** | **19** |
| **3rd week** | **14** |
| **4th week** | **15** |
| **5th week** | **20** |
| **6th week** | **19** |
| **Total** | **105** |

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| **學科** | **課程** | **時數** | **tutor** |
| 導引 (4 hrs) | 醫學導論(一):block1~16 總介紹  | 1 |  |
| 醫學導論(一): E-learning說明 | 1 |  |
| 醫學導論(一): TBL介紹 | 1 |  |
| block 1課程介紹及成績評定 | 1 |  |
| 生理學科 (15 hrs) | 生理學之介紹 | 2 | 何美泠 |
| 細胞生理學 (I)：細胞訊息與存活 | 2 | 蔡克勵 |
| 細胞生理學 (II)：細胞膜運輸 | 2 | 蔡克勵 |
| 細胞生理學(III) : 細胞膜電位調控與生物能量學 | 2 | 蔡克勵 |
| 骨骼肌生理學 | 2 | 陳贊如 |
| 心肌與平滑肌生理學 | 2 | 蔡克勵 |
| 細胞生理學(IV) : 細胞酸鹼調控  | 1 | 蔡克勵 |
| 突觸傳遞 | 2 | 黃烱瑋 |
| 微生物暨免疫學(16 hrs) | 微生物暨免疫學之介紹 & 細菌總論 | 3  | 張玲麗 |
| 黴菌總論 | 1 | 張仲羽 |
| 免疫總論 | 2 | 陳怡菁 |
| 體液免疫反應 & B細胞的產生與分化 | 3  | 陳怡菁 |
| T細胞的產生與分化 | 1 | 陳怡菁 |
| 抗原呈現 | 1 | 孫昭玲 |
| 淋巴球的活化與調節 | 2 | 孫昭玲 |
| 細胞激素 | 1 | 孫昭玲 |
| 免疫耐受性 | 1 | 孫昭玲 |
| 滅菌與消毒  | 1 | 陳怡菁 |
| 寄生蟲學 (3 hrs) | 寄生蟲總論 | 3 | 顏全敏 |
| 藥理學 (22 hrs) | 藥理學總論(general pharmacology) | 2 | 洪秀貞 |
| 藥物動力學(Pharmacokinetics) | 2 | 洪秀貞 |
| 藥物基因體學(Pharmacogenomic) | 2 | 洪秀貞 |
| 自主神經藥理概論 (Introduction to autonomic pharmacology) | 2 | 楊玉嬌 |
| 1. 擬膽鹼性作用劑 (Cholinergic drugs) 2.抗膽鹼性作用劑 (Cholinergic blocking agents) | 4 | 楊玉嬌 |
| 1. 擬腎上腺素作用劑 (Adrenergic drugs) 2. 抗腎上腺素作用劑 (Adrenergic blocking agents) | 4 | 吳炳男 |
| 1. 神經肌肉阻斷劑 (Neuromuscular blocking agents ) 2.神經節阻斷劑 (Ganglionic blocking agents)   | 2 | 楊玉嬌 |
| 1.自泌素 (Autacoids) (I): Prostaglandins,Thromboxanes Leukotrienes & Related Compounds  | 2 | 吳炳男 |
| 2. 自泌素 (Autacoids)(II): Histamine, Serotonin & the Ergot Alkaloids  | 2 | 葉竹來 |
| 分子生物學 (3 hr) | 細胞癌化 | 3 | 林常申 |
| 病理學 (18 hrs) | 病理學概論 | 3 | 楊曉芳 |
| 細胞適應、細胞受傷與細胞死亡 | 3 | 連培因 |
| 炎症與修復病理學 | 3 | 尹莘玲 |
| 腫瘤病理學概論 | 3 | 尹莘玲 |
| 細胞受損、炎症病理學實驗(504 & 505 教室) Pathology lab | 3 | 韋又菁 |
| 基礎腫瘤病理學實驗  | 3  | 陳怡庭 |
| 胚胎學 (8 hrs) | 胚胎學總論 | 2 | 李怡琛 |
| 胚盤及胚層的形成  | 2 | 李怡琛 |
| 體腔、系膜及橫膈的形成  | 2 | 李怡琛 |
| 器官形成、胎盤及胚膜  | 2 | 李怡琛 |
| 公共衛生學 (2 hrs) | 全球衛生  | 2 | 莊弘毅 |
| 實驗診斷學 (2 hrs) | 臨床檢驗判讀原則  | 2 | 陳百薰 |
| 實證醫學 (2 hrs) | 實證醫學概念 | 2 | 李智雄 |
| TBL (兩次) | TBL (兩次) | 4 |  |
| 專業素養 |  | 4 |  |
| 期中考, 期末考 | 期中考, 期末考 | 4 |  |
| 學習評量與回饋 | 學習評量與回饋 | 1 |  |

課程總時數:108 hrs (包括考試)

導引: 4 hrs

基礎時數: 87 hrs (包括生理,微生物暨免疫, 寄生蟲, 藥理, 病理, 分子生物, 胚胎,公共衛生)

臨床時數: 4 hrs (包括實驗診斷學,實證醫學)

TBL: 4 hrs

專業素養: 4 hrs

考試+回饋 : 5 hrs

基礎:臨床= 87:4

總成績計算:期中、期末兩次考試共佔90%(期中(46 hrs)、期末(45 hrs)成績以所佔總時數比例計算),兩次TBL各佔5%,出席加分