

顱顏影像與生長發育學

一、招生班別：顱顏口腔醫學研究所碩士學分班

二、課程簡介：

課程簡介	<p>顱顏生長發育學涵蓋基本發育理論、假設與學說，形態、功能及相對位置的改變，強調牙齒和上下顎正常與異常的發展，以及咬合不正的型態及原因。介紹研究顱顏生長發育的工具測顱學，熟習測顱學的方法與臨床應用，了解測顱學的限制並安排實作課程。三維醫學影像，講授成像原理，cone beam 電腦斷層影像，表面掃描，骨骼型態研究，軟組織擷取和分析，以及三維影像輔助設計和手術模擬。介紹及學習常用的三維醫學影像軟體，如 Analyze™ 和 Avizo™。</p>
教學目標	<ol style="list-style-type: none"> 1. 了解顱顏生長發育的機轉與理論基礎 2. 描述顱顏各區域的生長方式和過程 3. 了解測顱放射線之原理、臨床應用及限制。 4. 應用各種測顱放射線分析方法。 5. 熟悉二維測顱放射線之臨床使用及研究方法。 6. 了解三維顱顏影像的發展及臨床應用。
教學方法 (可複選)	<p> <input checked="" type="checkbox"/> 演講 <input type="checkbox"/> 問答 <input type="checkbox"/> 團體討論 <input type="checkbox"/> 分組討論 <input type="checkbox"/> 個案研討 <input type="checkbox"/> 示範 <input type="checkbox"/> 研習會 <input type="checkbox"/> 角色扮演 <input type="checkbox"/> 視聽教學 <input type="checkbox"/> 腦力激盪 <input type="checkbox"/> 活動教學 <input checked="" type="checkbox"/> 其他：文獻討論，學生報告，病例實作 </p>
成績考核	<ol style="list-style-type: none"> 1. 研究生出席率與上課參與程度50% 2. 研究生報告25% 3. 期末報告 25%
教科書	<p>顱顏生長發育學-</p> <ol style="list-style-type: none"> 1. Essentials of Facial Growth. Enlow DH and Hans MG. Saunders Company, Philadelphia, 1996 2. Handbook of Orthodontics. 4th ed. Chapter 1 to 7. Moyers RE, Year Book Medical publishers, 1988 <p>顱顏二維影像-</p> <ol style="list-style-type: none"> 1. Orthodontic Cephalometry: Edited by Athanasios E Athanasion Published in 1995 by Mosby-Wolfe . 2. Radiographic Cephalometry: From Basics to 3-D Imaging. Edited

	<p>by Alexander Jacobson, Richard L. Jacobson. 2nd ed. Quintessence Publishing Co. Inc. 2006.</p> <p>顱顏三維影像-自編教材</p>
<p>參考書(講義)</p>	<p>顱顏生長發育-</p> <ol style="list-style-type: none"> 1. Contemporary Orthodontics. Proffit WR. Related chapters of Facial Growth. 2. A Synopsis of Craniofacial Growth. International student edition. <p>顱顏二維影像-</p> <ol style="list-style-type: none"> 1. Othodontic Cephalometry . Edited by Athanasios E Athanasion Published in 1995 by Mosby-Wolfe. 2. An Atlas and Manual of Cephalometric Radiography, Thomas Rakosi, 1982, Wolfe Medical Publication. 3. Centemporary Cephalometric Radiography. Kunihiro Miyashita, Quintessence Publishing Co. Inc. 1996. <p>顱顏三維影像-</p> <ol style="list-style-type: none"> 1. Diah E, Lo LJ, Huang CS, Sudjatmiko G, Susanto I, and Chen YR. Maxillary growth of adult patients with unoperated cleft: answers to the debates. Journal of Plastic, Reconstructive, & Aesthetic Surgery 60: 407-413, 2007. 2. Kane AA, Lo LJ, Christensen GE, Vannier MW, Marsh JL. Relationship between bone and muscles of mastication in hemifacial microsomia. Plast Reconstr Surg 1997;99:990-7. 3. Lee MY, Chang CC, Lin CC, Lo LJ, and Chen YR. 3D image reconstruction and rapid prototyping models in custom implant design for patient with cranial defect. IEEE Engineering in Medicine and Biology 21(2): 38-44, 2002. 4. Lo LJ, and Chen YR. 3-dimensional CT imaging in craniofacial surgery: morphological study and clinical applications. Chang Gung Medical Journal 26(1): 1-11, 2003. 5. Lo LJ, Marsh JL, Vannier MW, Patel VV. Craniofacial computer assisted surgical planning and simulation. Clin Plast Surg

	<p>1994;21:501-516.</p> <p>6、Mardini S, See LC, Lo LJ, Salgado CJ, and Chen YR. Intracranial space, brain and cerebrospinal fluid volume measurements in patients with and without Crouzon syndrome with the aid of 3-dimensional computerized tomography data. Journal of Neurosurgery 103:238-246, 2005.</p> <p>7、Perlyn CA, Marsh JL, Vannier MW, Kane AA, Koppel P, Clark KW, Christensen GE, Knapp R, Lo LJ, Govier D. The craniofacial anomalies archive at St. Louis Children's Hospital: 20 years of craniofacial imaging experience. Plast Reconstr Surg 2001;108:1862-70.</p> <p>8、Robb RA, Barillot C. Interactive display and analysis of 3-D medical images. IEEE Transactions on Medical Imaging 1989;8:217-226.</p> <p>9、Robb RA, Hanson DP, Karwoski RA, Larson AG, Workman EL, Stacy MC. ANALYZE: a comprehensive, operator-interactive software package for multidimensional medical image display and analysis. Computerized Medical Imaging and Graphics 1989;13:433-454.</p> <p>10、Robb RA. Biomedical Imaging, Visualization and Analysis, John Willey and Sons, Inc., New York, NY 1999</p>
<p>教師簡介</p>	<p>羅綸洲／長庚大學顱顏口腔醫學研究所教授／台灣大學學士</p> <p>黃炯興／長庚大學顱顏口腔醫學研究所教授／加拿大多倫多大學博士</p> <p>廖郁芳／長庚大學顱顏口腔醫學研究所教授／英國倫敦大學博士</p> <p>柯雯青／長庚大學顱顏口腔醫學研究所教授／美國伊利諾大學碩士</p> <p>劉人文／長庚大學顱顏口腔醫學研究所助理教授／美國伊利諾大學碩士</p> <p>吳秋彬／長庚大學顱顏口腔醫學研究所兼任講師／美國西北大</p>

	學博士 張晏祥／林口長庚牙科部一般牙科主任／長庚大學醫務管理研 究所碩士
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三、收費標準：每學分每人 6,000 元，報名費每人 500 元

四、上課時間：109 年 2 月 18 日起 每星期二 09:10~12:00

五、上課地點：長庚大學第二醫學大樓

六、授課大綱：

週次	上課日期	開始/結束 時間	時 數	授課大綱	授課教師
1	109/02/18	09:10~12:00	3hr	Mechanism of Craniofacial Growth and Basic Growth Concept	Ellen Wen-Ching Ko
2	109/02/25	09:10~12:00	3hr	Growth and Development of Neurocranium, Nasomaxillary Complex	Ellen Wen-Ching Ko
3	109/03/03	09:10~12:00	3hr	3D Imaging: Morphological Study	Lun-Jou Lo
4	109/03/10	09:10~12:00	3hr	Theory and Hypothesis of Craniofacial Development	Chiung-Shing Huang
5	109/03/17	09:10~12:00	3hr	Growth and Development of Mandible	Ellen Wen-Ching Ko
6	109/03/24	09:10~12:00	3hr	Lateral and PA Cephalometry, and Panorex: Clinical Applications and Limitations	Eric JW Liou
7	109/03/31	09:10~12:00	3hr	Lateral Cephalometry: Clinical Applications and Limitations	Ellen Wen-Ching Ko
8	109/04/07	09:10~12:00	3hr	Cephalometric Superimposition	Yu-Fang Liao
9	109/04/14	09:10~12:00	3hr	Dental CAD/CAM System	Yen-Hsiang Chang
10	109/04/21	09:10~12:00	3hr	Micro CT: Introduction and Application	Hsiang-Hsi Hong
11	109/04/28	09:10~12:00	3hr	3dMD: Introduction and Application	Yuh-Jia Hsieh
12	109/05/05	09:10~12:00	3hr	Aging Face	Yu-Fang Liao
13	109/05/12	09:10~12:00	3hr	Software for 3D Imaging: Part 1	Hsiu-Hsia Lin

14	109/05/19	09:10~12:00	3hr	Dental CT: Introduction and Application	Yen-Hsiang g Chang
15	109/05/26	09:10~12:00	3hr	Orthognathic Surgical Simulation	Ellen Wen-Chin g Ko
16	109/06/02	09:10~12:00	3hr	Software for 3D Imaging: Part 2	Hsiu-Hsia Lin
17	109/06/09	09:10~12:00	3hr	Computer-Assisted Orthognathic Simulation	Yuh-Jia Hsieh
18	109/06/16	09:10~12:00	3hr	Computer-Assisted Implant Placement	Ching-Kai Lin

※以上師資與課程內容時間場地等僅供參考，若有異動以各系所公告為主。