Course Description for Postgraduates

<table>
<tr><td colspan="3">Course Title: Modern Pathological Technology</td><td colspan="3">Course Code: 510.522</td></tr>
<tr><td colspan="6">Course category: □High-level course □international course □Advanced international courses ■Common course</td></tr>
<tr><td colspan="6">Course Type: □1st-level discipline basic courses □2nd-level discipline basic courses ■Optional professional courses</td></tr>
<tr><td colspan="6">The Methods of Assessment: Paper Test and practice</td></tr>
<tr><td colspan="3">Teaching Method: Full English Teaching (Lecture & Practice)</td><td colspan="3">Applicable Educational Level:
Master■ Doctor □</td></tr>
<tr><td colspan="2">The Beginning of the Term: the first semester</td><td colspan="2">Total Hours/Teaching Hours: 32/12</td><td colspan="2">Credits: 2</td></tr>
<tr><td colspan="6">Applicable Specialty: Neurology</td></tr>
<tr><td>Name of the Teachers of the Course Group</td><td>Professional Title</td><td>Major</td><td>Age</td><td colspan="2">Academic Direction</td></tr>
<tr><td>Wang Guoping</td><td>Professor</td><td>Pathology</td><td>55</td><td colspan="2">Molecular pathology</td></tr>
<tr><td>Wang Xi</td><td>Professor</td><td>Pathology</td><td>46</td><td colspan="2">Immunopathology</td></tr>
<tr><td>Ao Qilin</td><td>Associate Professor</td><td>Pathology</td><td>46</td><td colspan="2">Immunopathology</td></tr>
<tr><td>Yuan Yonghui</td><td>Senior engineer</td><td>Pathology</td><td>51</td><td colspan="2">Pathology technology</td></tr>
<tr><td colspan="6">Course Outline:
Aim: To teach master students of contemporary pathology research methods and practical skills, and provide scientific and technical support for postgraduate research topics.
The course features: the course introduces not only conventional pathology techniques, but also new techniques of modern biology, and combined with experimental research, such as clinical application technology, and the main content of the course is the sampling, preparation, immunofluorescence, immunohistochemistry, in situ hybridization, FISH and CISH technology. Techniques</td></tr>
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for in situ detection of cell proliferation and apoptosis, paraffin section gene rearrangement, and so on. The changes in the expression of related proteins or nucleic acid molecules in the cells of the pathological tissue or in the cultured cells and their special morphological changes were detected in the pathological sections and cultured cells.

Curriculum design: This course combines traditional pathology technology with modern molecular biology technology, including the traditional HE slice production, and the latest immunohistochemical two-step method and in situ hybridization FISH experiment. The curriculum is set up as far as possible to minimize the principle of multi hands-on operation (theoretical and experimental classes are assigned by 3:5), which each experiment requires students to operate independently and write experimental reports, so as to cultivate students' ability to analyze and solve problems, most important, carry out path morphology independently through study.

Guide Books:

self-designed teaching material for postgraduate

Main Reference Books:

《组织病理学技术》 周庚寅编，北京大学医学出版社，2006 年 10 月

《病理学技术》 王伯沄 等主编，人民卫生出版社，2000