

## 臺灣大學土木工程學系研究所博士班資格考試科目表(109.4.17 版)

### Department of Civil Engineering Doctoral Candidate Qualifying Examination Subjects

1. 資格考試事宜請詳閱本所「博士學位候選人資格考試實施辦法」之規定。

For details please read the Department's "Guidelines for the Implementation of Doctoral Qualifying Examination".

2. 各學門筆試學科詳列如下表(請注意係考「學科」，範圍較單一科目為廣)

The subjects of the written examination for each division are listed below. (The examination covers a wide range of subject matter, which requires the student to have extensive knowledge of his/her field.)

學 門 Field	學 科 Subjects
大地工程 Geotechnical Engineering	1. 土壤力學 Soil Mechanics 2. 岩石力學 Rock Mechanics 3. 土壤動力學或工程地質學 (任選一科) Soil Dynamics and Foundation Vibration or Engineering Geology (Select either one)
結構工程 Structural Engineering	94.10.14修定 Revised on 14 October 2005 1. 結構動力學或高等混凝土學 Structural Dynamics or Advanced concrete Theory 2. 結構力學 Structural Mechanics (含彈性力學與塑性力學) (including Theory of Elasticity and Theory of Plasticity) 3. 結構學 Structural Theory (含高等結構學與有限元素法) (including Advanced Structural Theory and Finite Element

	<p>Method)  <b>共考三科 All three subjects are required.</b>  (適用於106學年度前入學學生)  (Applicable to students who entered the program before fall 2017)</p> <p>1. 結構動力學或高等混凝土學  Structural Dynamics or Advanced Concrete Theory</p> <p>2. 結構力學 Structural Mechanics  (含彈性力學與塑性力學)  (including Theory of Elasticity and Theory of Plasticity)</p> <p>3. 高等結構學或有限元素法  Advanced Structural Theory or Finite Element Method</p> <p><b>共考三科 All three subjects are required.</b>  (適用於 106 學年度入學學生)  (Applicable to students who entered the Program from fall 2017)</p> <p>106.10.3 修定 Revised on 3 October 2017</p>
<p>水 利 工 程  Hydraulic Engineering</p>	<p>1. 水利工程理論  Hydraulic Engineering Theories</p> <p>2. 水利工程方法論  Hydraulic Engineering Methodologies  (包括工數、統計、數值與實驗 including Engineering Mathematics, Statistics, Numerical Analysis, and Experiments)</p> <p>3. 水利工程應用  Hydraulic Engineering Applications</p> <p>94.09.26修定 Revised on 26 September 2005</p>
<p>交 通 工 程</p>	<p>1. 運輸系統規劃  Transportation System Planning</p>

<p style="text-align: center;">Transportation Engineering</p>	<p>2. 運輸系統設計 Transportation System Design</p> <p>3. 運輸系統分析 Transportation System Analysis</p> <p>4. 研究方法 Research Methodology</p>
<p style="text-align: center;">營建工程與管理 Construction Engineering and Management</p>	<p>1. 工程專案管理 Project Management for Construction</p> <p>2. 營建財務 Construction Finance</p> <p>3. 計量實證研究方法論 Econometric and Empirical Research Methodology</p> <p>以上皆為必考</p> <p><b>All three subjects are required</b></p> <p>108.11.05修定 Revised on 5 November 2019</p>
<p style="text-align: center;">電腦輔助工程 Computer-Aided Engineering (CAE)</p>	<p>1. CAE 應用 CAE Applications</p> <p>2. CAE 技術 CAE Technology (數值分析或工程資訊管理或電腦視覺技術或自動化技術) (Numerical Analysis, Engineering Information Management, Engineering Visualization, or Automation and Robotics)</p> <p>3. CAE 系統開發 CAE Systems Development (軟體系統分析與設計或專案管理或人機介面設計) (Software Systems Analysis and Design, Project Management, or User Interface Design)</p> <p>98.05.05修定 Revised on 5 May 2009</p>
<p style="text-align: center;">測量及空間資訊 Survey and Geospatial Engineering</p>	<p>1. 誤差理論 Error Theory</p> <p>2. 遙感探測 Remote Sensing</p>

	<p>3. 數值攝影測量 Digital Photogrammetry  4. 衛星大地測量 Satellite Geodesy  5. 地理資訊系統  Geographic Information System  <b>以上 5 科選 3 科 Three subjects are selected out of the five listed above.</b></p> <p>98.09.04修定 Revised on 04 Sept 2009</p>
<p style="text-align: center;">人工智慧 Artificial Intelligence</p>	<p>1. 人工智慧技術 Artificial intelligence techniques  2. 人工智慧於工程上之應用 Engineering Applications of Artificial Intelligence  3. 由本系認可之博士班資格考考科中擇一科目進行考試  Choose one subject from the doctoral qualification exams recognized by the Department</p> <p>109.04.09 修定 Revised on 09 April 2020</p>

3. 申請時間:自即日起至\_\_\_\_年 月 日止,申請時需附論文研究計劃(請寄至tcshen@ntu.edu.tw),申請表格請向系辦索取或至土木系網頁自行下載使用。

3. Application deadline: \_\_\_\_\_

To apply for the qualifying examination, please email your research proposal to tcshen@ntu.edu.tw. The application form can be obtained from the Department Office or downloaded from the Department website (<http://www.ce.ntu.edu.tw/>文件下載/).

4. 筆試時間:\_\_\_\_年 月 日(詳細時間地點另行通知)

4. Written examination date: \_\_\_\_\_ (Examination location to be announced.)

5. 口試由各組資格考試委員會辦理。

5. The oral examination is organized by the Examination Committee of each respective division.