

**Doctoral Curriculum in Department of Civil Engineering For 2020**

| Architecture Group                                       | Civil Engineering Group                            |  |  |  |   |
|--|--|--|--|--|---|
|  | Graduate Courses in Sustainable Development        | Graduate Courses in Structural Engineering                                     | Graduate Courses in Geotechnical Engineering   | Graduate Courses in Management                               | General Courses                               |
| Architectural Disaster Prevention(3)                     | Water Environment Science (3)                      | Application of Non-destructive Inspection for Civil Technology (3)             | Slope Stability Analysis and Mitigation(3)   | Project Management (3)                                       | Application of Innovation Thinking (3)        |
| Topical Studies in Architectural Spatial Theory(3)       | Green Energy and Technology(3)                     | Applications of Health Monitoring and Inspection Technology for Engineering(3) | Analysis of Ground Water Modeling (3)  | Cost and Financial Management (3)                            | English Reading and Writing in Profession (3) |
| Building Technology Developmen(3)                        | Conservation of Soil and Water Resources (3)       | Application of Elasticity in Engineering Structures(3)                         | Rock Mechanics and Engineering (3)   | Quality Management (3)                                       | Guideline for Writing a Technigue Pape (3)    |
| Green Building and Eco-City(3)                           | Flood Control Engineering (3)                      | Analysis of Structural Dynamics(3)   | Advanced Soil Mechanics (3)  | Schedule Management (3)                                      | The History of Engineering and Technology (3) |
| Special Topic of Oceanic Architecture and Environment(3) | Green Geomaterials (3)                             | Special Topics of Structural Mechanics (3)                                     | Advanced Foundation Engineering (3)  | Construction Innovation and Creative Design(3)               | Civil Construction Practice (3)               |
| Knowledge Economy and Industrial Cluster(3)              | Green Industrials and Green Building(3)            | Earthquake Resistant Design of Structures(3)                                   | Foundation Engineering Design(3)   | Innovative Design of Green Technology(3)                     | Data Analysis (3)                             |
| Regional Innovation and Development Strategy(3)          | App Development for BIM Application(3)             | Special Topics of Building Structure Design (3)                                | Tunnel and Underground Space Technology (3)  | The Appl:Cation of Information Technology(3)                 | Quality Control of Construction (3)           |
| Industrial Environment Planning(3)                       | Assessment of Engineering Structures Integrity (3) | Finite Element Method(3)   | Construction Practice in Geotechnical Engineering(3)                                       | Safety and Health for Construction Engineering Management(3) | Special Topics of Civil Engineering (3)       |
| Special Topics on Intelligent City(3)                    | Geotechnical Disasters and Prevention (3)          |  | Forensic Engineering in Geotechnical Failure Inrestigation(3)                              |  | Practice of Surveying Engineering(3)          |
| Special Issues in Urban Renewal(3)                       | Special Topics in Soil and Water Conservation (3)  |  | Soil Dynamics (3)  |  |   |
|  | Special Topics in Sustainable Engineering(3)       |  | The Design and Construction of Major Transportation Projects by the Underground Methods(3) |  |   |
|  | Earthquake Engineering (3)                         |  | The Design and Construction of Major Transportation Projects by The Elevated Methods(3)    |  |   |
|  | Environmental Remote Sensing (3)                   |  |  |  |   |
|  | Hydraulic Engineering(3)                           |  |  |  |   |
|  | River Restoration and Assessment(3)                |  |  |  |   |
|  | Environmental Impact Assessment(3)                 |  |  |  |   |
|  | Water Resources Engineering and Planning (3)       |  |  |  |   |

\* Graduation Qualifications:

- 1.24 credits. (Include 4 semesters of Seminar, and at least 2 semesters of Thesis Seminar).
- 2.The dissertation oral examination must be passed.
- 3.Academic Ethics Online Course must be Passed.
- 4.Please refer to the Study Regulations for the Doctoral Program of the Department.

\*The number of courses offered each academic year will be adjusted according to the actual approved standards.