

Tamkang University Academic Year 108, 1st Semester Course Syllabus

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| Course Title | TRANSPORTATION ENGINEERING | Instructor | CHIH-LIN CHUNG |
| Course Class | TLTXB2B DEPARTMENT OF TRANSPORTATION MANAGEMENT, 2B | Details | <ul style="list-style-type: none"> ◆ General Course ◆ Required ◆ One Semester |
| D e p a r t m e n t a l A i m o f E d u c a t i o n | | | |
| <p>I. To obtain professional transportation knowledge.</p> <p>II. To familiarize with execution of transportation practices.</p> <p>III. To master oral expression and teamwork.</p> <p>IV. To capture basic skills of system analysis.</p> <p>V. To emphasize professional transportation ethics.</p> | | | |
| Subject Departmental core competences | | | |
| <p>A. To obtain basic knowledge of transportation management.(ratio:80.00)</p> <p>D. To obtain basic ability of system analysis.(ratio:20.00)</p> | | | |
| Subject Schoolwide essential virtues | | | |
| <p>1. A global perspective. (ratio:10.00)</p> <p>2. Information literacy. (ratio:25.00)</p> <p>3. A vision for the future. (ratio:5.00)</p> <p>4. Moral integrity. (ratio:5.00)</p> <p>5. Independent thinking. (ratio:30.00)</p> <p>7. A spirit of teamwork and dedication. (ratio:20.00)</p> <p>8. A sense of aesthetic appreciation. (ratio:5.00)</p> | | | |

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| Course Introduction | <p>This course introduces transportation engineering-related concepts and guidelines, covering four parts as 1) Transportation Engineering Introduction, 2) Highway Engineering, 3) Railway Engineering, and 4) Airport Engineering. This course is designed for undergraduates in their sophomore year.</p> |
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The correspondences between the course's instructional objectives and the cognitive, affective, and psychomotor objectives.

Differentiate the various objective methods among the cognitive, affective and psychomotor domains of the course's instructional objectives.

- I. Cognitive : Emphasis upon the study of various kinds of knowledge in the cognition of the course's veracity, conception, procedures, outcomes, etc.
- II. Affective : Emphasis upon the study of various kinds of knowledge in the course's appeal, morals, attitude, conviction, values, etc.
- III. Psychomotor: Emphasis upon the study of the course's physical activity and technical manipulation.

| No. | Teaching Objectives | objective methods |
|-----|--|-------------------|
| 1 | Students could understand transportation engineering at an introductory level. | Cognitive |
| 2 | Students could discover related issues in daily life. | Cognitive |
| 3 | Classroom knowledge could match practical planning and design procedures. | Cognitive |

The correspondences of teaching objectives : core competences, essential virtues, teaching methods, and assessment

| No. | Core Competences | Essential Virtues | Teaching Methods | Assessment |
|-----|------------------|-------------------|---------------------|---|
| 1 | AD | 12 | Lecture, Discussion | Testing, Report(including oral and written) |
| 2 | AD | 34 | Lecture, Discussion | Testing, Study Assignments |
| 3 | AD | 578 | Lecture, Discussion | Testing, Discussion(including classroom and online) |

Course Schedule

| Week | Date | Course Contents | Note |
|------|--------------------------|-----------------|------|
| 1 | 108/09/09 ~ 108/09/15 | Introduction | |

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| 2 | 108/09/16 ~ 108/09/22 | Decision Making | |
| 3 | 108/09/23 ~ 108/09/29 | Geography and Network | |
| 4 | 108/09/30 ~ 108/10/06 | Project Evaluation | |
| 5 | 108/10/07 ~ 108/10/13 | Highway Engineering Introduction | |
| 6 | 108/10/14 ~ 108/10/20 | Grade | |
| 7 | 108/10/21 ~ 108/10/27 | Sight Distance | |
| 8 | 108/10/28 ~ 108/11/03 | Horizontal Curve | |
| 9 | 108/11/04 ~ 108/11/10 | Vertical Curve | |
| 10 | 108/11/11 ~ 108/11/17 | Midterm Exam Week | |
| 11 | 108/11/18 ~ 108/11/24 | Railway Introduction, Alignment, and Train | |
| 12 | 108/11/25 ~ 108/12/01 | Track, Turnout, Switch, and Siding | |
| 13 | 108/12/02 ~ 108/12/08 | Rail Station and Depot | |
| 14 | 108/12/09 ~ 108/12/15 | Airport Introduction and Master Plan | |
| 15 | 108/12/16 ~ 108/12/22 | Runway and Taxiway Planning | |
| 16 | 108/12/23 ~ 108/12/29 | Airport Terminal Planning | |
| 17 | 108/12/30 ~ 109/01/05 | Airport Ground Transportation | |
| 18 | 109/01/06 ~ 109/01/12 | Final Exam Week (Date:109/1/3-109/1/9) | |
| Requirement | This English Transportation Engineering class is for those who want to improve English listening, no matter from Calss 2A or 2B. If you don't like English, please take 2A's Chinese Transportation Engineering class. | | |
| Teaching Facility | Computer, Projector | | |
| Textbooks and Teaching Materials | 1. Lecture notes. 2. 周義華, 運輸工程, 華泰文化出版. 3. Fundamentals of Transportation, Wikibooks (http://en.wikibooks.org/wiki/Fundamentals_of_Transportation) | | |
| References | Internet data and publications. | | |
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| Number of Assignment(s) | 4 (Filled in by assignment instructor only) |
| Grading Policy | ◆ Attendance : 12.0 % ◆ Mark of Usual : 48.0 % ◆ Midterm Exam : 20.0 % ◆ Final Exam : 20.0 % ◆ Other () : % |
| Note | This syllabus may be uploaded at the website of Course Syllabus Management System at http://info.ais.tku.edu.tw/csp or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at http://www.acad.tku.edu.tw/CS/main.php . ※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications. |