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**Department of Architecture**

**College of Engineering**

**University of Salahaddin**

**Subject: Surveying Engineering**

**Course Book: Third Year**

**Lecturer's name: Assistant Lecturer *Mrs. Hadeel J. Ali***

**Academic Year: 2022/2023**

**Course Book**

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| **1. Course name** | **Surveying Engineering** |
| **2. Lecturer in charge** | **Assistant Lecturer Mrs. Hadeel Jamal Ali** |
| **3. Department/ College** | **Engineering - Surveying** |
| **4. Contact** | **e-mail:** **hadeel.ali@su.edu.krd****hadeel.j.ali@gmail.com** |
| **5. Time (in hours) per week**  | **Lecture duration :( 2hrs Theory + 2hrs Practical) /week** |
| **6. Office hours** | **Sunday: 8:30-12:30****Tuesday: 8:30-12:30****Thursday: 10:30-12:30** |
| **7. Course code** |  |
| **8. Teacher's academic profile**  | [**https://academics.su.edu.krd/hadeel.ali**](https://academics.su.edu.krd/hadeel.ali)**I am Hadeel Jamal Ali. I was born in Baghdad / Iraq. I completed my studying for M.Sc. in University of Technology/Baghdad, College of Building and Construction Engineering (2009-2012), Specialization: Geomatic Engineering. Now, I am working in Salahaddin University-Hawler as Assistant Lecturer in Engineering college/Surveying Department. I am teaching for Second (Data Processing), Third (Highway Engineering), Fourth (GIS) Stage.** |
| **9. Keywords** |  |
| **10. Course overview:** It is the art of measuring horizontal and vertical distances between objects, of measuring angles between lines, of determining the direction of lines, and of establishing points by predetermined angular and linear measurements. • Along with the actual survey measurements are the mathematical calculations. |
| **11. Course objective:**The objective of this course is for students to gain a solid understanding of the principles of surveying engineering as a part of their professional studies in a manner that will attain the best possible results. This course will present a number of practical problems, and in sufficient depth, such that the student will be capable of solving real surveying related problems. |
| **12. Student's obligation**Students are expected to attend all class meetings. There is specific penalty for missing a class; however, students are responsible for the content of each lecture, which may or may not be contained in the textbook. In-class illustrative problems are expected to be worked on during the scheduled class time; thus, student must present during these class sessions1. Homework assignments. The objective of these homework assignments are to assist in the learning of course material, so discussion of homework among students is encouraged, but remember that it will be in best interest to understand all of the assigned problems. However, every student is responsible for turning in an individual assignment. The main goal of the homework to learn the concepts of the course, so that you can prove it on the quizzes and exams.
2. Class illustrative problems. These are comprehensive problems covering the major topics of each chapter. These will be worked on in class, with the assistance of the lecturer.
3. Quizzes. These quizzes will be closed-book, consisting of qualitative questions addressing major concepts of the chapter.
4. Two semester exams. These exams will be closed book. The exams will consist of comprehensive quantitative problems that relate to any of the material covered during the semester.
5. One final exam. This exam will be closed-book. The exam will consist of comprehensive quantitative problems that relate to any of the material covered during the academic year.
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| **13. Forms of teaching**No two teachers are alike, and any teacher with classroom teaching experience will agree that style of teaching is uniquely own. An effective teaching style engages students in the learning process and helps them develop critical thinking skills. Traditional teaching styles have evolved with the advent of differentiated instruction; prompting teachers to adjust their styles toward students’ learning needs. There are many different types of teaching and learning materials that can be used by lecturer. Like traditional methods: pens, whiteboard, Eraser and Methods illustrative: Maps, Charts, diagrams, Books, Videos and Overhead projectors, Slide PowerPointAlthough it is not the teacher’s job to entertain students, it is vital to engage them in the learning process. Selecting a style that addresses the needs of diverse students at different learning levels begins with a personal inventory — a self-evaluation — of the teacher’s strengths and weaknesses. |
| **14. Assessment scheme**The grade distribution is as follows:

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| ***Examination*** | ***Approximate Date*** | ***Mark (%)*** |
| ***Mid-term*** | ***April***  | ***20*** |
| ***Quizzes, homework assignments, and attendances***  |  | ***20*** |
| ***Final Practical Examination*** |  | ***10*** |
| ***Final Examination*** | ***June*** | ***50*** |
| ***Total Mark*** |  | ***100*** |

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| **15. Student learning outcome:**By the end of the course, you will be able to:*
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| **16. Course Reading List and References‌:*** Surveying for Engineers, 5th edition ,By: John Uren & Bill Price.
* Construction Surveying and Lay Out, 3rd edition, By: Wesley G. Crawford.
* Surveying with construction application, 5th edition By: Barry F. Kavanagh.
* S.K. Roy, 2010, "Fundamentals of surveying", India, PHI learning.
* Punmia, Ashor and Aron, 2005, "Surveying I", India, Laxmi Publications.
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| **17. The Topics:** | **Lecturer's name** |
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| Week | Title |
| 1 | History of Surveying |
| 2 | Surveying for Architectures |
| 3 | Liner Surveying  |
| 4 | Leveling , Automatic level |
| 5 | Loop Leveling |
| 6 | Grid Leveling |
| 7 | Contour Map |
| 8 | Profile and Cross Section |
| 9 | Theodolite |
| 10 | Angle measurement |
| 11 | Azimuth ,Bearing , Traverse |
| 12 | Horizontal Curves |
| 13 | Area Measurement |
| 14 | Area from Coordinates |
| 30 | Remote Sensing |

 | **Assistant Lecturer Mrs. Hadeel Jamal Ali****(2 hours)** |
| **18. Practical Topics** **Assistant Lecturer Mrs. Hadeel Jamal Ali (2 hours)** |  |
| **19. Examinations:** |
| **20. Extra notes:****Course content may vary or be adjusted in order to meet the needs of the class. The teacher reserves the right to adjust the schedule or amend the content of this syllabus at any time.** |
| **21. Peer review** .‌‌  |