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| **logoUniversity of Management & Technology**School of Science & TechnologyDepartment of Electrical Engineering |
| EL 418 Digital Signal Processing Lab |
| **Lab Schedule** | Tuesday 11:00 – 14:00Thursday 11:00 – 14:00 | **Semester** | Fall 2013 |
| **Pre-requisite** | EE315 Signals & Systems | **Credit Hours** | 1 |
| **Instructor(s)** | Abu Bakar Siddique | **Contact** | abubakar@umt.edu.pk |
| **Office** | S3-43 Room-8 | **Office Hours** | Check Moodle and Office Window |
| **Lab Work Objectives** | The lab deals with fundamental and practical aspect of discrete time signal processing. It is designed to practically implement and observe the phenomenon of discrete time systems, their frequency and time response. It also covers Z - Transform, digital filters and introduction to TSK6714 DSP kit. |
| **Expected Outcomes** | Upon completion of this lab, students will:* Have good understanding of implementing discrete time systems
* Be able to check stability and frequency response of system
* Implement IIR and FIR digital filter structures
* Have understanding to work on DSP Kit
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| **Textbook(s)** | As mentioned by the Theory Instructor(s) |
| **Grading Policy** | * Lab Grading : 60%
* Midterm Evaluation : 20 %
* Final Evaluation : 20%
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**Course Schedule**

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| **LAB** | **Topic** |
| 1 | Introduction to Discrete Time systems and their Properties |
| 2 | Discrete Time Fourier Transform |
| 3 | Properties of Discrete Time Fourier Transform |
| 4 | Z - Transform |
| 5 | System Representation in Z – Domain |
| 6 | Introduction to TSK6714 DSP Kit  |
| **Mid Term Viva & Performance** |
| 7 | Introduction to TSK6713 BIOS and Multitasking for Signal Generation.  |
| 8 | IIR Filter Structures |
| 9 | FIR Filter Structures |
| 10 | Digital Filter Design |
| 11 | Introduction to FDA Tools |
| 12 | Discrete Fourier Transform |
| 13 | Properties of Discrete Fourier Transform |
| 14 | Implementation of Moving Average Filter on Speech Signal |
| **Final Viva & Performance Final Viva & Performance** |