

ICT Elementary for Embedded Systems

NSTDA, KU and SIIT, Thammasat University

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| Course | : ICT Elementary for Embedded Systems |
| Credit | : 0 credits |
| Semester | : Semester III / 2017 (for the ICTES 2018 students) |
| Period | : July 5-31, 2019 |
| Coordinators | : Prof. Dr. Thanaruk Theeramunkong, Dr. Dusit Thanapatay Asst. Prof. Dr. Denchai Worasawate, Assoc. Prof. Dr. Waree Kongprawechnon |
| Assumption | : 20 Students |
| Class | : Monday-Friday 9:00-16:00 (TSP-CC ICTES Classroom) |

Office hours: Wednesday, Thursday 12:00-14:20

Main Textbook and Reference:

1. www.cs.jhu.edu/~jason/advice/how-to-read-a-paper.html, www.engin.umd.umich.edu/~brahim/Potential05-reading.pdf
2. Probability and Statistics: Yates and Goodman, Probability and Stochastic Processes, John Wiley and Sons, 1999.
3. Vector and Matrix: Erwin Kreyszig, Advanced Engineering Mathematic, 9th edition, Wiley Information Edition
4. Fourier Transform: <http://www.amazon.com/Digital-Image-Processing-Rafael-Gonzalez/dp/013168728X> (Chapter 4 Filtering in the Frequency Domain)
5. Digital Circuits: <http://www.amazon.com/Digital-Fundamentals-10th-Thomas-Floyd/dp/0132359235>
6. Data compression: <http://www.amazon.com/Digital-Image-Processing-Rafael-Gonzalez/dp/013168728X> (Chapter 8 Image Compression)

Class Schedule:

| Wk | Date | | Time | Topics | Lecturer |
|----|---------------|--------|-------------|---|--|
| 1 | July 5, 2019 | (Fri.) | 09:00-12:00 | Introduction to ICTES/How to find read/write articles | Thanaruk Theeramunkong (thanaruk@siit.tu.ac.th) |
| 2 | July 8, 2019 | (Mon.) | 09:00-12:00 | Mathematics Fundamental (Matrix) | Denchai Worasawate (fengdcw@ku.ac.th) |
| 3 | July 8, 2019 | (Mon.) | 13:00-16:00 | Signal/Electronic Fundamental (Analog Circuit) | Denchai Worasawate (fengdcw@ku.ac.th) |
| 4 | July 9, 2019 | (Tue.) | 09:00-12:00 | Mathematics Fundamental (Probability) | Teerasit Kasetkasem (fengtsk@ku.ac.th) |
| 5 | July 9, 2019 | (Tue.) | 13:00-16:00 | Mathematics Fundamental (Statistics) | Teerasit Kasetkasem (fengtsk@ku.ac.th) |
| 6 | July 10, 2019 | (Wed) | 09:00-12:00 | Creative Thinking | Virach Sortlertlamvanich (virach@siit.tu.ac.th) |
| 7 | July 10, 2019 | (Wed) | 13:00-16:00 | Mathematics Fundamental (Information Theory) | Poonlap Lamsrichan (fengpll@ku.ac.th) |
| 8 | July 11, 2019 | (Thu.) | 09:00-12:00 | Mathematics Fundamental (Vector) | Ekachai Phaisangittisagul (fengecp@ku.ac.th) |
| 9 | July 11, 2019 | (Thu.) | 13:00-16:00 | Signal/Electronic Fundamental (Signal Processing) | Miti Ruchanurucks (fengmtr@ku.ac.th) |
| 10 | July 12, 2019 | (Fri.) | 09:00-12:00 | Signal/Electronic Fundamental (Data Communication) | Komwut Wipusitwarakun (komwut@siit.tu.ac.th) |
| 11 | July 12, 2019 | (Fri.) | 13:00-16:00 | Mathematics Fundamental (Discrete Mathematics/Permutation/Combination) | Ekawit Nantajeewarawat (ekawit@siit.tu.ac.th) |
| 12 | July 18, 2019 | (Thu.) | 09:00-12:00 | Signal/Electronic Fundamental (Fourier Transform) | Prapun Suksompong (prapun@siit.tu.ac.th) |
| 13 | July 18, 2019 | (Thu.) | 13:00-16:00 | Signal/Electronic Fundamental (Principles of Communication) | Prapun Suksompong (prapun@siit.tu.ac.th) |
| 14 | July 31, 2019 | (Wed.) | 09:00-12:00 | Basics of Microcontrollers and Applications (Basic Embedded System Hardware, Arduino/Sensors/NETPIE) (I) | Seksan Laitrakun (seksan@siit.tu.ac.th) |
| 15 | July 31, 2019 | (Wed.) | 13:00-16:00 | Basics of Microcontrollers and Applications (Basic Embedded System Hardware, Arduino/Sensors/NETPIE) (II) | Seksan Laitrakun (seksan@siit.tu.ac.th) |