



## IOT TRAINING

### DAY 1

1. Basic Automation Standards
2. Interfacing Devices
  - 2.1. Digital Input
  - 2.2. Digital Output
  - 2.3. Analog Input
  - 2.4. Analog Output
  - 2.5. PWM
3. Communication Standards
4. Safety Software Standards for Automation Software
5. Structures of PLC and SCADA Logic
6. Control Theory (PI, PID, Filter Theorems)

### DAY 2

7. Raspberry Pi Hardware
8. Basic Linux Embedded Topics
9. Interfacing Industrial Raspberry Pi Shield: MiniIOEx-3G Hardware
10. Physical Environment Commissioning
  - 10.1. Digital Input Usage on MiniIOEx
  - 10.2. Digital Output Usage MiniIOEx
  - 10.3. Analog Input Usage and Basic Filter Algorithms Application
  - 10.4. Serial Communication Application
    - 10.4.1 RS232\*
    - 10.4.2 RS485\*
    - 10.4.3 Modbus TCP\*
  - 10.5. The Internet of Things
    - 10.5.1 Web User Interface
    - 10.5.2 Serverless Database Connection and Implementation with Digital/Analog IO
    - 10.5.3 3G Connection and GPS Commissioning\*
  - 10.6. Application

\* : *Optional*

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**Course Length:** 2 Days – 09:00 AM-17:00 PM

**Course Language:** Turkish

**Course Price:** Please contact support@pe2a.com

**Contact:** support@pe2a.com

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### Requirements:

To be a graduate of an engineering faculty or having work experience on software area.



## Course Instructors

### Dr. Seçkin Durmuş



Dr. Durmuş who is providing R&D department of private companies in Istanbul with consultancy services has been the author of more than 50 publications, which are published in national and international journals, conferences and books. Dr. Durmuş has two Ph.D. degrees, one from Istanbul Technical University (Turkey) and the other from Osaka University (Japan).

### Education

Ph.D. 2012-2015	Osaka University, Osaka , Japan Graduate School of Engineering Electric, Electronic and Information Engineering Department, Intelligent Systems Laboratory
Ph.D. 2007-2014	Istanbul Technical University, Istanbul, Turkey Control and Automation Engineering
M.Sc. 2002-2005	Pamukkale University, Denizli, Turkey Electrical and Electronics Engineering Department
B.Sc. 1998-2002	Pamukkale University, Denizli, Turkey Electrical and Electronics Engineering Department

### Görkem Ziya Yanık



Since embedded PC's costs are very high, following an R&D's study, Mr. Yanık and his team have designed IO and 3G shields with an optimum sale price. Mr. Yanık has been involved in major projects as a team leader for the development of various electronical products and software. He is a graduate of Istanbul Technical University. He is currently working as a Senior Electric and Electronic Engineer in a private company. His interests are IOT, Electronic Hardware Design and Smart Grid.

### Education

M.Sc. 2013-ongoing	Istanbul Technical University, Istanbul, Turkey Graduate School of Science Engineering and Technology
B.Sc. 2008-2013	Istanbul Technical University, Istanbul, Turkey Electrical Engineering