COMPUTER ENGINEERING

COURSES

Contents

Arab Academy for Science, Technology and Maritime Transport

Training Course Information Form

Course Information

Course Name: Programming Embedded Systems using C and C++

Institute/Centre: College of Engineering **Department:** Computer Engineering

Type: ❑ Program ☑ Course ❑ Workshop

Course Duration: ☑ 5 days ❑ 3 days ❑ 1 days ❑ Other: ----------

Course Conducted: ☑ Local ❑ International
Indicate: ----------

Course Venue: AASTMT- AbuKir

Course Language: ☑ English ❑ Arabic ❑ Both ❑ Other: ----------

Course Description

Course Outlines:

- C and C++ programming review
- Writing, compiling, linking and debugging your first embedded program
- Getting to know the hardware; processor memory and peripherals
- Multitasking and code optimization

Course Objectives:

- Introduction to the field of embedded systems
- Writing programs for real time embedded systems
- Code optimization with constraints on memory, speed and power
- Dealing with the Software / hardware interaction
- Develop programs for embedded systems

Learning outcomes:

- Upon completion of this course each attendant will be able to write codes for embedded systems

Course includes: ☑ Theoretical ❑ Tutorial ☑ Laboratory ❑ Workshop ❑ Site Visit

Course Prerequisites:

Recommended is a familiarity with C programming

Who should attend:

- Engineers in all fields and/or programmers who want to learn about embedded systems and embedded systems programming

Course References:

60. Embedded Systems Architecture: A Comprehensive Guide for Engineers and Programmers, Newnes, 2005.
61. Programming Embedded Systems: With C and GNU Development tools, 2nd edition, O'Reilly Media, 2006.
62. Embedded System Design: A unified Hardware / Software Introduction, Frank Vahid and Tony Givargis Wiley, 2001.
63. Instructor Handouts.

Training Course Information form

No. of Participants/course: ❑5-10 ❑10-15 ❑15-20 ❑Other: ----------

Qualifications of Participants:

- B.Sc. or B.Eng.
- Familiarity with Computers and programming

No. of Lecturer: ☑1 ❑2 ❑3

No. of Assistance: ☑1 ❑2 ❑3

Course Facilities

☑ White Board ❑ V. Projector ☑Data show ☑ PC ❑ Manual ☑ Handouts
❑ Books ❑Flip charts ❑ S/W ❑Other: ----------

Course Evaluation

☑ Written Examination ❑ Written Report(s) ❑ Oral Presentation ☑ Attendance
❑ Delegates Participation

Certificate Issue: ❑ Local Premises ❑✔AASTMT ❑ International

Course Registration

Registration: ☑AAST Admission Registration ❑ Online ❑ Other: ----------

Sponsor: ❑ Individual ❑ Funded By:

Fee's: ☑ L.E. ---1500--- ❑ $ ---------- ❑ Other: ----------

Documents required: ❑ Registration form ❑ ID/Passport copy ❑ Photo

Training Course Information form

Arab Academy for Science, Technology and Maritime Transport

Training Course Information Form

Course Information

Course Name: Introduction to Data Communications and Computer Networks

Institute/Centre: College of Engineering **Department:** Computer Engineering

Type: ❑ Program ☑ Course ❑ Workshop

Course Duration: ❑ 5 days ☑ 3 days ❑ 1 days ❑ Other: ----------

Course Conducted: ☑ Local ❑ International
Indicate: ----------

Course Venue: AASTMT- AbuKir

Course Language: ☑ English ❑ Arabic ❑ Both ❑ Other: ----------

Course Description

Course Outlines:

- Motivations for Networking and Datacomm and Networks Fundamentals
- Physical Communications Options (dial-up modems, ISDN, DSL and wireless)
- Local Area Networks (LANs) characteristics, concepts, standards, and interconnection of LANs
- Wide Area Networks (WANs) characteristics, concepts, protocols.
- Interconnecting Networks and Router concepts
- Application protocols

Course Objectives:

- Apply fundamental datacomm and network concepts and terminology
- Work with datacomm hardware and software components
- Evaluate leading-edge network technologies
- Utilize key network protocols and standards
- Choose between local and wide area networks

Learning outcomes:

- Upon completion of this course each attendant will have a thorough understanding of how the basic networking components work and how they are put together to implement a data communications and networking system.

Course includes: ☑ Theoretical ❑ Tutorial ☑ Laboratory ❑ Workshop ❑ Site Visit

Course Prerequisites:

None

Who should attend:

- Anyone who requires a technical introduction to data communications and computer networks

Course References:

Training Course Information form

64. Data and Computer Communications 8/E William Stallings, Prentice Hall, 2007
65. Computer Networks 4/E Tanenbaum, Prentice Hall, 2003
66. Instructor Handouts.

No. of Participants/course: ☑5-10 ❑10-15 ❑15-20 ❑Other: ----------

Qualifications of Participants:

- Higher education
- Average English

No. of Lecturer: ☑1 ❑2 ❑3

No. of Assistance: ❑1 ❑2 ❑3

Course Facilities

☑ White Board ❑ V. Projector ☑Data show ☑ PC ❑ Manual ☑ Handouts
❑ Books ❑Flip charts ☑ S/W ❑Other: ----------

Course Evaluation

❑ Written Examination ❑ Written Report(s) ❑ Oral Presentation ☑ Attendance
❑ Delegates Participation

Certificate Issue: ❑ Local Premises ❑☑AASTMT ❑ International

Course Registration

Registration: ☑AAST Admission Registration ❑ Online ❑ Other: ----------

Sponsor: ❑ Individual ❑ Funded By:

Fee's: ☑ L.E. ----500--- ❑ $ ---------- ❑ Other: ----------

Documents required: ❑ Registration form ❑ ID/Passport copy ❑ Photo

Training Course Information form

Arab Academy for Science, Technology and Maritime Transport

Training Course Information Form

Course Information

Course Name: Local Area Networks: Implementation and Configuration

Institute/Centre: College of Engineering **Department:** Computer Engineering

Type: ❑ Program ☑ Course ❑ Workshop

Course Duration: ☑ 5 days ❑ 3 days ❑ 1 days ❑ Other: ----------

Course Conducted: ☑ Local ❑ International
Indicate: ----------

Course Venue: AASTMT- AbuKir

Course Language: ☑ English ❑ Arabic ❑ Both ❑ Other: ----------

Course Description

Course Outlines:

- LAN Fundamentals and Communications across LANs
- Evaluating types of LAN cabling systems
- Major LAN standards and switching techniques
- MultliLAN Networks and Configuration
- Protocols and LAN Performance
- Installing and Operating a LAN

Course Objectives:

- Apply basic LAN terminology, technology and protocols
- Select LAN technology based on application requirements
- Configure LAN to interconnect the computing resources of your organization
- Evolve from workgroup LANs to enterprise-wise networks

Learning outcomes:

- Fundamental knowledge needed to design, configure and implement LANs

Course includes: ☑Theoretical ❑ Tutorial ☑ Laboratory ❑ Workshop ❑ Site Visit

Course Prerequisites:

Data Communications and Network Introduction course or equivalent experience.

Who should attend:

- Anyone involved in office automation, or involved in designing, configuring or implementing LANs

Course References:

Training Course Information form

67. Local and Metropolitan Area Network 6/E William Stallings, Prentice Hall, 2000
68. Local Area Network, Patrick Regan Prentice Hall, 2004
69. Instructor Handouts.

No. of Participants/course: ☑5-10 ❑10-15 ❑15-20 ❑Other: ----------

Qualifications of Participants:

- Higher education
- Average English

No. of Lecturer: ☑1 ❑2 ❑3

No. of Assistance: ❑1 ❑2 ❑3

Course Facilities

☑ White Board ❑ V. Projector ☑Data show ☑ PC ❑ Manual ☑ Handouts
❑ Books ❑Flip charts ❑ S/W ❑Other: ----------

Course Evaluation

❑ Written Examination ❑ Written Report(s) ❑ Oral Presentation ☑ Attendance
❑ Delegates Participation

Certificate Issue: ❑ Local Premises ❑✔AASTMT ❑ International

Course Registration

Registration: ■AAST Admission Registration ❑ Online ❑ Other: ----------

Sponsor: ❑ Individual ❑ Funded By: 5000 L.E. Egyptian Company

Fee's: ❑ L.E. 800 For Egyptian ❑ $ 200 For non Egyptian ❑ Other: 2000 $ Non Egyptian Company

Documents required: ❑ Registration form ■ ID/Passport copy ❑ Photo

Training Course Information form

Arab Academy for Science, Technology and Maritime Transport

Training Course Information Form

Course Information

Course Name: Computer and Communications Systems Simulation

Institute/Centre: College of Engineering **Department:** Computer Engineering

Type: ❑ Program ☑ Course ❑ Workshop

Course Duration: ☑ 5 days ❑ 3 days ❑ 1 days ❑ Other: ----------

Course Conducted: ☑ Local ❑ International
Indicate: ----------

Course Venue: AASTMT- AbuKir

Course Language: ☑ English ❑ Arabic ❑ Both ❑ Other: ----------

Course Description

Course Outlines:

- Role of simulation in computer and communication systems engineering
- Simulation approaches and methodologies
- Signal and system representations
- Random number generation, Monte Carlo simulation and post-processing
- Semi-analytic simulation techniques and discrete event simulation

Course Objectives:

- Understand the art and science of system simulation
- Apply different simulation techniques for computer and communication systems

Learning outcomes:

- Upon completion of the course the student will be able to efficiently simulate computer and communications systems.

Course includes: ☑ Theoretical ❑ Tutorial ❑ Laboratory ❑ Workshop ❑ Site Visit

Course Prerequisites:

- Familiarity with programming using any language preferably C as well as basic knowledge of matlab

Who should attend:

- Graduate students and professionals involved in the simulation and performance analysis of computer and communications systems

Course References:

70. Principles of Communication Systems Simulation with wireless applications Tranter, Prentice Hall, 2004
71. Discrete-Event Simulation: A first Course 1/e Leemis & Park, Prentice Hall, 2006

No. of Participants/course: ☑5-10 ❑10-15 ❑15-20 ❑Other: ----------

Qualifications of Participants:

- B.Eng. or senior level student

No. of Lecturer: ☑1 ❑2 ❑3

No. of Assistance: ❑1 ❑2 ❑3

Course Facilities

☑ White Board ❑ V. Projector ☑Data show ❑ PC ❑ Manual ☑ Handouts
❑ Books ❑Flip charts ❑ S/W ❑Other: ----------

Course Evaluation

❑ Written Examination ❑ Written Report(s) ❑ Oral Presentation ☑ Attendance
❑ Delegates Participation

Certificate Issue: ❑ Local Premises ❑✔AASTMT ❑ International

Course Registration

Registration: ■AAST Admission Registration ❑ Online ❑ Other: ----------

Sponsor: ❑ Individual ❑ Funded By: 5000 L.E. Egyptian Company

Fee's: ❑ L.E. 800 For Egyptian ❑ $ 200 For non Egyptian ❑ Other: 2000 $ Non Egyptian Company

Documents required: ❑ Registration form ■ ID/Passport copy ❑ Photo

Training Course Information form

Arab Academy for Science, Technology and Maritime Transport

Training Course Information Form

Course Information

Course Name: Management Information Systems

Institute/Centre: AAST/ College of Eng. **Department:** Computer Engineering

Type: ❑ Program ☑ Course ❑ Workshop

Course Duration: ❑ 5 days ☑ 3 days ❑ 1 days ❑ Other: ----------

Course Conducted: ☑ Local ☑ International
Indicate: ----------

Course Venue: AASTMT-AbuQir

Course Language: ☑ English ☑ Arabic ❑ Both ❑ Other: ----------

Course Description

Course Outlines:

- Information Technology &Information Systems
- Data and Knowledge Management
- Business Information Systems
- Planning and development of an information system
- Information technology in e-commerce
- Telecommunications and Networks
- Using of Internet

Course Objectives:

This course discusses some important topics that managers need in order to survive in a competitive environment. To begin with, the course defines the basic needs for any information system including, people, hardware, software, networks, and data management. In addition, the course defines the major functions and uses of information systems in different fields as well as the risks that may affect any information system and the methods used for disaster recovery. Last but not the least the course gives a clear idea about e-commerce and steps needed to establish an e-commerce web site.

Learning outcomes:

At the end of this course the students will be able to

- Describe how computers process data into useful information for problem solving and decision making.
- Identify the functions of different types of information systems.
- Describe how different information systems serve different levels within an organization.
- Evaluate how telecommunication and database technology can help implement the goals of information systems.

Training Course Information form

- Identify steps needed for the planning and development of an information system.
- Identify the risks that may affect an information system and the various methods used for securing systems and disaster recovery.
- Recognize the role of information technology in e-commerce.

Course includes: ❑Theoretical ☑ Tutorial ❑ Laboratory ❑ Workshop ❑ Site Visit

Course Prerequisites:

None

Who should attend:

- Employees
- Internal auditors
- Environmental managers

Course References:

No. of Participants/course: ☑5-10 ❑10-15 ❑15-20 ❑Other: ----------

Qualifications of Participants:

- Higher education
- Environmental awareness
- Teamwork skills
- Average English

No. of Lecturer: ☑1 ❑2 ❑3

No. of Assistance: ❑1 ❑2 ❑3

Course Facilities

☑ White Board ☑ V. Projector ❑Data show ❑ PC ❑ Manual ❑ Handouts
❑ Books ❑ Handouts ❑Flip charts ❑ S/W ❑Other: ----------

Course Evaluation

☑ ❑ Written Examination ❑ Written Report(s) ☑ Oral Presentation ☑ Attendance
❑ Delegates Participation

Certificate Issue: ❑ Local Premises ❑ AASTMT ❑ ☑International

Course Registration

Registration: ■AAST Admission Registration ❑ Online ❑ Other: ----------

Sponsor: ❑ Individual ❑ Funded By: 5000 L.E. Egyptian Company

Fee's: ❑ L.E. 800 For Egyptian ❑ $ 200 For non Egyptian ❑ Other: 2000 $ Non Egyptian Company

Documents required: ❑ Registration form ■ ID/Passport copy ❑ Photo

Arab Academy for Science, Technology and Maritime Transport

Training Course Information Form

Course Information

Course Name: (MATLAB I) : A Guid in MATLAB for Beginners

Institute/Centre: AAST/ College of Eng. **Department:** Computer Engineering

Type: ❑ Program ☑ Course ❑ Workshop

Course Duration: ☑ 5 days ❑ 3 days ❑ 1 days ❑ Other: ----------

Course Conducted: ☑ Local ☑ International
Indicate: ----------

Course Venue: AASTMT- AbuQir

Course Language: ☑ English ☑ Arabic ❑ Both ❑ Other: ----------

Course Description

Course Outlines:

- Introduction to MATLAB
- MATLAB Graphical Tools
- 2D & 3D Plotting tools
- Image processing Tools
- Statistical ToolBox
- Design of Graphical User Interfaces
- Using of MATLAB for user-defined Application Design

Course Objectives:

- Describe the purpose of using the MATLAB software for design, processing and simulation. Moreover, it enables the participant to be familiar with the use of MATLAB Command window, Help Guide, Project Design, statistical tools, 2D & 3D Plots, graphical tools, image processing tools and Design of Graphical user Interfaces

Learning outcomes:

At the end of this course the students will be able to use The MATLAB design tools, graphical interfaces, 2D & 3D plot, Image processing tools, simulation tools, and link with other applications and software environments.

Course includes: ☑ Theoretical ☑ Tutorial ☑ Laboratory ❑ Workshop ❑ Site Visit

Course Prerequisites:

None

Who should attend:

- Graduated students of different background
- Employees and engineers

Course References:

Training Course Information form

No. of Participants/course: ☑5-10 ❑10-15 ❑15-20 ❑Other: ----------

Qualifications of Participants:

- Higher education
- Environmental awareness
- Teamwork skills
- Average English

No. of Lecturer: ☑1 ❑2 ❑3

No. of Assistance: ☑1 ❑2 ❑3

Course Facilities

☑ White Board ☑ V. Projector ☑Data show ❑ PC ☑ Manual ☑ Handouts
❑ Books ☑Flip charts ❑ S/W ❑Other: ----------

Course Evaluation

☑ Written Examination ❑ Written Report(s) ☑ Oral Presentation ☑ Attendance
☑ Delegates Participation

Certificate Issue: ❑ Local Premises ❑ AASTMT ❑International

Course Registration

Registration: ■AAST Admission Registration ❑ Online ❑ Other: ----------

Sponsor: ❑ Individual ❑ Funded By: 5000 L.E. Egyptian Company

Fee's: ❑ L.E. 800 For Egyptian ❑ $ 200 For non Egyptian ❑ Other: 2000 $ Non Egyptian Company

Documents required: ❑ Registration form ■ ID/Passport copy ❑ Photo

Training Course Information form

Arab Academy for Science, Technology and Maritime Transport

Training Course Information Form

Course Information

Course Name: (MATLAB II) : A Guid in MATLAB for Experienced Users

Institute/Centre: AAST/ College of Eng. **Department:** Computer Eng.

Type: ❑ Program ☑ Course ❑ Workshop

Course Duration: ☑ 5 days ❑ 3 days ❑ 1 days ❑ Other: ----------

Course Conducted: ☑ Local ☑ International
Indicate: ----------

Course Venue: AASTMT- AbuQir

Course Language: ☑ English ☑ Arabic ❑ Both ❑ Other: ----------

Course Description

Course Outlines:

- Overview of MATLAB (part I)
- Data Acquisition ToolBox
- Audio and Video processing tools
- Simulation ToolBox
- Advanced Image processing
- DSP Tools
- Neural Network Tool Box

Course Objectives:

- This Course represents a Guid for the use of MATLAB software tools (additionally to the tools specified in part I). It enables the participant to be familiar with Data Acquisition toolBox, Audio and Video processing tools, Advanced image process tools, DSP tools and Neural Network toolBox.

Learning outcomes:

At the end of this course the students will be able to use The MATLAB design tools, graphical interfaces, 2D & 3D plot, Image processing tools, Data Acquisition tools, simulation tools, and link with other applications and software environments.

Course includes: ☑ Theoretical ☑ Tutorial ☑ Laboratory ❑ Workshop ❑ Site Visit

Course Prerequisites:

MATLAB I : A Guid in MATLAB for Beginners

Who should attend:

- Graduated students of different background
- Employees and engineers

Course References:

Training Course Information form

No. of Participants/course: ❑5-10 ❑10-15 ❑15-20 ❑Other: ----------

Qualifications of Participants:

- Higher education
- Environmental awareness
- Teamwork skills
- Average English

No. of Lecturer: ☑1 ❑2 ❑3

No. of Assistance: ☑1 ❑2 ❑3

Course Facilities

☑ White Board ☑ V. Projector ☑Data show ❑ PC ☑ Manual ☑ Handouts
❑ Books ☑Flip charts ❑ S/W ❑Other: ----------

Course Evaluation

☑ Written Examination ❑ Written Report(s) ☑ Oral Presentation ☑ Attendance
☑ Delegates Participation

Certificate Issue: ❑ Local Premises ❑ AASTMT ❑International

Course Registration

Registration: ■AAST Admission Registration ❑ Online ❑ Other: ----------

Sponsor: ❑ Individual ❑ Funded By: 5000 L.E. Egyptian Company

Fee's: ❑ L.E. 800 For Egyptian ❑ $ 200 For non Egyptian ❑ Other: 2000 $ Non Egyptian Company

Documents required: ❑ Registration form ■ ID/Passport copy ❑ Photo

Training Course Information form

Arab Academy for Science, Technology and Maritime Transport

Training Course Information Form

Course Information

Course Name: Visual Basic

Institute/Centre: AAST/ College of Eng. **Department:** Computer Engineering

Type: ❑ Program ☑ Course ❑ Workshop

Course Duration: ☑ 5 days ❑ 3 days ❑ 1 days ❑ Other: ----------

Course Conducted: ☑ Local ☑ International
Indicate: ----------

Course Venue: AASTMT- AbuQir

Course Language: ☑ English ☑ Arabic ❑ Both ❑ Other: ----------

Course Description

Course Outlines:

- Introduction to Visual Basic
- Using of and Navigation through Visual Basic menus
- Input/Output, display, print, and interface commands
- Using of statistical Build in functions (Case Study)
- User-defined functions, Conditioning statements, Repetition structures and conditional loops
- Design of Graphical User Interfaces
- Engineering Problem solving and Applications using visual Basic Design (Case Study I), (Case Study II)

Course Objectives:

- Describe the purpose of using the Visual Basic software for design, processing and simulation. Moreover, it enables the participant to be familiar with the use of visual Basic Commands , Help Guide, Project Design, statistical tools, Plotting, graphical tools and Design of Graphical user Interfaces.

Learning outcomes:

At the end of this course the students will be able to use The Visual Basic design tools, graphical interfaces, User defined functions, project building using visual basic and link with other applications and software environments.

Course includes: ☑ Theoretical ☑ Tutorial ☑ Laboratory ❑ Workshop ❑ Site Visit

Course Prerequisites:

None

Who should attend:

- Graduated students of different background
- Employees and engineers

Course References:

Training Course Information form

No. of Participants/course: ❑5-10 ❑10-15 ❑15-20 ❑Other: ----------

Qualifications of Participants:

- Higher education
- Environmental awareness
- Teamwork skills
- Average English

No. of Lecturer: ☑1 ❑2 ❑3

No. of Assistance: ❑1 ❑2 ❑3

Course Facilities

☑ White Board ☑ V. Projector ☑Data show ❑ PC ☑ Manual ☑ Handouts
❑ Books ☑Flip charts ❑ S/W ❑Other: ----------

Course Evaluation

☑ Written Examination ❑ Written Report(s) ☑ Oral Presentation ☑ Attendance
☑ Delegates Participation

Certificate Issue: ❑ Local Premises ❑ AASTMT ❑International

Course Registration

Registration: ■AAST Admission Registration ❑ Online ❑ Other: ----------

Sponsor: ❑ Individual ❑ Funded By: 5000 L.E. Egyptian Company

Fee's: ❑ L.E. 800 For Egyptian ❑ $ 200 For non Egyptian ❑ Other: 2000 $ Non Egyptian Company

Documents required: ❑ Registration form ■ ID/Passport copy ❑ Photo

Training Course Information form

Arab Academy for Science, Technology and Maritime Transport

Training Course Information Form

Course Information

Course Name: Digital Systems Fundamentals, Design, and Applications

Institute/Centre: AAST/ College of Engineering&Tech. **Department:** Computer Engineering

Type: ❑ Program ☑ Course ❑ Workshop

Course Duration: ☑ 5 days ❑ 3 days ❑ 1 days ❑ Other: ----------

Course Conducted: ☑ Local ☑ International
Indicate: ----------

Course Venue: AASTMT- AbuQir

Course Language: ☑ English ☑ Arabic ❑ Both ❑ Other: ----------

Course Description

Course Outlines:

- Introduction to Analog and Digital Systems.
- Logic Gates and Integrated circuits Technology
- Combinatorial Logic (MUX/DEMUX, DECODER/ENCODER, COMPARATOR, ADDER)
- Digital Control Systems Design & Applications
- Counter design
- Software design tools

Course Objectives:

- Describe the principals and applications of analogue & digital systems and explain the digital design issues.
- Gives an overview of IC Technology (CMOS / TTL) and using of logic gates for circuits design.
- How to use Multiplexer and Demultiplexers, Decoder and Encoders, Adders and Comparators in digital circuit design.
- Study of different industrial relevant applications and the Design & diagnosis of Digital Control systems.
- Study of Counters Types and counter Design issues.
- Enable the participant to use different software tools in digital circuit design and diagnosis.

Learning outcomes:

At the end of this course the students will be able to Design and implement Digital circuits to satisfy the requirements of any relevant Environmental or industrial application.

Course includes: ☑ Theoretical ☑ Tutorial ☑ Laboratory ❑ Workshop ❑ Site Visit

Course Prerequisites:

None

Who should attend:

- Employees
- Engineers

Course References:

Training Course Information form

No. of Participants/course: ❑5-10 ❑10-15 ❑15-20 ❑Other: ----------

Qualifications of Participants:

▪ ▪	▪ Teamwork skills ▪ Average English

No. of Lecturer: ☑1 ❑2 ❑3

No. of Assistance: ☑1 ❑2 ❑3

Course Facilities

☑ White Board ☑ V. Projector ☑Data show ❑ PC ☑ Manual ☑ Handouts
❑ Books ☑Flip charts ❑ S/W ❑Other: ----------

Course Evaluation

☑ Written Examination ❑ Written Report(s) ☑ Oral Presentation ☑ Attendance
☑ Delegates Participation

Certificate Issue: ❑ Local Premises ❑ AASTMT ❑International

Course Registration

Registration: ■AAST Admission Registration ❑ Online ❑ Other: ----------

Sponsor: ❑ Individual ❑ Funded By: 5000 L.E. Egyptian Company

Fee's: ❑ L.E. 800 For Egyptian ❑ $ 200 For non Egyptian ❑ Other: 2000 $ Non Egyptian Company

Documents required: ❑ Registration form ■ ID/Passport copy ❑ Photo

Training Course Information form

Arab Academy for Science, Technology and Maritime Transport

Training Course Information Form

Course Information

Course Name: VHDL and FPGA Design

Institute/Centre: Collage of Engineering **Department:** Computer Engineering

Type: ❑ Program ☑ Course ❑ Workshop

Course Duration: ☑ 5 days ❑ 3 days ❑ 1 days ❑ Other: ----------

Course Conducted: ☑ Local ❑ International Indicate: ----------

Course Venue: AASTMT- AboOir

Course Language: ❑ English ❑ Arabic ☑ Both ❑ Other: ----------

Course Description

Course Outlines:

- Introduction to FPGA Synthesis
- Introduction to VHDL
- Different kinds and architectures of FPGAs
- How to design systems with FPGAs
- How to upgrade legacy systems with FPGAs

Course Objectives:

The course aims to provide knowledge and practical experience in the design of digital circuits and systems using computer aided design techniques for implementation in FPGA technology; including:

- Detailed understanding of the architectural features of FPGA families.
- Explain how to create the most appropriate manufacturing solution with a reduced risk and cost.
- Introduce the basic techniques necessary to design FPGA-based digital systems using the VHDL hardware description language.

Learning outcomes:

On completion of this course the student will be able to:

- Demonstrate a critical understanding of VHDL hardware programming language: syntax and structures.
- Analyse and appraise common FPGA types and architectures.
- Implement and test a programmed FPGA

Course includes: ☑ Theoretical ☑ Tutorial ❑ Laboratory ❑ Workshop ❑ Site Visit

Course Prerequisites:

Honours Degree in Computer / Electronics / Electrical

Who should attend:

- Engineers who wish to become skilled in the practical use of VHDL for FPGA or ASIC design.
- Digital designers, System Architects and Embedded System Design Engineers.

Course References:

72. Wayne Wolf, FPGA-Based System Design, CMP Books, 2006.
73. Bob Reese, Digital System Design , McGraw-Hill, 2004.
74. A.D, Inc. . Introduction to VHDL ,Xilinx , 2003.

No. of Participants/course: ❑5-10 ❑10-15 ❑15-20 ✔ ❑Other: ----------

Qualifications of Participants:

- B.Sc. in Electrical, Computer, or Electronics Engineering
- Skillful in CAD and embedded systems

No. of Lecturer: ☑1 ❑2 ❑3

No. of Assistance: ☑1 ❑2 ❑3

Course Facilities

☑ White Board ❑ V. Projector ☑Data show ☑ PC ❑ Manual ❑ Handouts
❑ Books ❑Flip charts ☑ S/W ☑Other: -FPGA tool kit----------

Course Evaluation

☑ Written Examination ☑ Written Report(s) ❑ Oral Presentation ☑ Attendance
❑ Delegates Participation

Certificate Issue: ❑ Local Premises ❑✔AASTMT ❑ International

Course Registration

Registration: ■AAST Admission Registration ❑ Online ❑ Other: ----------

Sponsor: ❑ Individual ❑ Funded By: 10000 L.E. Egyptian Company

Fee's: ❑ L.E. 800 For Egyptian ❑ $ 200 For non Egyptian ❑ Other: 3000 $ Non Egyptian Company

Documents required: ❑ Registration form ■ ID/Passport copy ❑ Photo

Training Course Information form

Arab Academy for Science, Technology and Maritime Transport

Training Course Information Form

Course Information

Course Name: Fundamentals of Network Security

Institute/Centre: Collage of Engineering **Department:** Computer Engineering

Type: ❑ Program ☑ Course ❑ Workshop

Course Duration: ☑ 5 days ❑ 3 days ❑ 1 days ❑ Other: ----------

Course Conducted: ☑ Local ❑ International
Indicate: ----------

Course Venue: AASTMT- AboOir

Course Language: ❑ English ❑ Arabic ☑ Both ❑ Other: ----------

Course Description

Course Outlines:

- Introduction to Network Perimeters
- Identifying Threats to Network Devices
- Monitoring Network Traffic
- Access Control
- Introduction to Cryptography
- Using Hash Functions
- Using Public Key Encryption
- Steganography and Watermarking Systems

Course Objectives:

Teach end-to-end network security concepts and techniques with comprehensive information on how to design a comprehensive security defense model. Plus, discloses how to develop and deploy computer, personnel, and physical security policies, how to design and manage authentication and authorization methods.

Learning outcomes:

- Identify network perimeter threats and monitor perimeter security for a network.
- Preserve business continuity by implementing a secure disaster recovery strategy.
- Identify, respond to, and assist in the formal investigation of security incidents.

Course includes: ☑Theoretical ☑ Tutorial ☑ Laboratory ❑ Workshop ❑ Site Visit

Course Prerequisites:

General Knowledge of Networking concepts and at least one Computer language (Assembler, C or Java)

Who should attend:

The course is designed for administrators who are responsible for the day-to-day administration work. Other IT professionals may also take this course on the path to becoming a security specialist.

Course References:

- Eric Maiwald, Fundamentals of Network Security, McGraw-Hill , 2004.
- Keith Strassberg, Network Security: The Complete Reference, McGraw-Hill , 2004.
- Fabien, A.P.Petitcolas, Information Hiding Techniques for Steganography and Digital Watermarking, British Library, 2000

No. of Participants/course: ❑5-10 ❑10-15 ❑15-20 ❑Other: ----------

Qualifications of Participants:

- Bachelor's degree from an accredited institute
- General Knowledge of Networking concepts
- Good Knowledge of English
- Familiarity with at least one computer language

No. of Lecturer: ☑1 ❑2 ❑3

No. of Assistance: ☑1 ❑2 ❑3

Course Facilities

☑ White Board ☑ V. Projector ☑Data show ☑ PC ❑ Manual ❑ Handouts
❑ Books ❑Flip charts ☑ S/W ❑Other: ----------

Course Evaluation

☑ Written Examination ❑ Written Report(s) ☑ Oral Presentation ☑ Attendance
❑ Delegates Participation

Certificate Issue: ❑ Local Premises ❑AASTMT ❑ International

Course Registration

Registration: ■AAST Admission Registration ❑ Online ❑ Other: ----------

Sponsor: ❑ Individual ❑ Funded By: 10000 L.E. Egyptian Company

Fee's: ❑ L.E. 800 For Egyptian ❑ $ 200 For non Egyptian ❑ Other: 3000 $ Non Egyptian Company

Documents required: ❑ Registration form ■ ID/Passport copy ❑ Photo

Training Course Information form

Arab Academy for Science, Technology and Maritime Transport

Training Course Information Form

Course Information

Course Name: Office Automation

Institute/Centre: Collage of Engineering **Department:** Computer Engineering

Type: ❑ Program ☑ Course ❑ Workshop

Course Duration: ☑ 5 days ❑ 3 days ❑ 1 days ❑ Other: ----------

Course Conducted: ☑ Local ☑ International Indicate: Middle East and Gulf Area

Course Venue: AASTMT- AboQir

Course Language: ❑ English ❑ Arabic ☑ Both ❑ Other: ----------

Course Description

Course Outlines:

- Computer Fundamentals
- Internet Technology
- MS – Word
- MS – Power Point
- Windows O/S
- Web Design
- MS – Access
- MS – Excel

Course Objectives:

Gets an in depth training in Office Automation packages and enable students to discover the engineer's standard office software (web-page editing, word processing, charts, presentations, etc). The course also helps to develop programming skills & to build a strong foundation on Database Management.

Learning outcomes:

- Managing, analyzing and presenting data.
- Create Company Presentations and Profiles.
- Create and type Letters, Reports, Memos, Proposals,, Graphical Presentations, Web pages, etc.
- Design rich and colorful dynamic web sites using the latest technologies and tools.

Course includes: ☑Theoretical ❑ Tutorial ☑ Laboratory ❑ Workshop ❑ Site Visit

Course Prerequisites:

None

Who should attend:

The course has been designed for individuals who are currently employed in an office and need retraining or who need to upgrade their skills because of the impact of technology. The course is also ideal for people who are involved in office administration, document preparation-charts, reports, presentations, and so on.

Training Course Information form

Course References:

75. Stephanie Krieger, Advanced Microsoft Office Documents 2007 Edition Inside Out, Microsoft press, 2007.
76. Curtis Frye, Microsoft® Office Small Business Accounting 2006 Step by Step, Microsoft press, 2005
77. Available at http://office.microsoft.com

No. of Participants/course: ❑5-10 ❑10-15 ☑15-20 ❑Other: ----------

Qualifications of Participants:

- degree from an accredited institution of higher education
- Knowledge of computer fundamentals

- Good Knowledge of English
- Familiarity with at least one computer language

No. of Lecturer: ☑1 ❑2 ❑3

No. of Assistance: ☑1 ❑2 ❑3

Course Facilities

☑ White Board ☑ V. Projector ☑Data show ☑ PC ❑ Manual ❑ Handouts
❑ Books ❑Flip charts ☑ S/W ❑Other: ----------

Course Evaluation

☑ Written Examination ❑ Written Report(s) ☑ Oral Presentation ☑ Attendance
❑ Delegates Participation

Certificate Issue: ❑ Local Premises ☑ AASTMT ❑ International

Course Registration

Registration: ■AAST Admission Registration ❑ Online ❑ Other: ----------

Sponsor: ❑ Individual ❑ Funded By: 10000 L.E. Egyptian Company

Fee's: ❑ L.E. 800 For Egyptian ❑ $ 200 For non Egyptian ❑ Other: 3000 $ Non Egyptian Company

Documents required: ❑ Registration form ■ ID/Passport copy ❑ Photo

Training Course Information form

Arab Academy for Science, Technology and Maritime Transport

Training Course Information Form

Course Information

Course Name: Introduction to Robotics

Institute/Centre: Collage of Engineering **Department:** Computer Engineering

Type: ❑ Program ☑ Course ❑ Workshop

Course Duration: ☑ 5 days ❑ 3 days ❑ 1 days ❑ Other: ----------

Course Conducted: ☑ Local ❑ International Indicate: ----------

Course Venue: AASTMT- AboQir

Course Language: ❑ English ❑ Arabic ☑ Both ❑ Other: ----------

Course Description

Course Outlines:

- Robotics Background
- Historical Development
- Robotics Technology
- Robot Mechanics
- Robot Sensing, Programming and Software

Course Objectives:

- Understand what the advantages and disadvantages are of Industrial Robotics.
- Explore robotic design variations and configurations.
- Develop an understanding of the types of robot processing capabilities that are available.

Learning outcomes:

- Describe some of the most common robot applications used today in manufacturing.
- Describe typical material handling applications that utilize robotics.
- Recognize the steps involved that are necessary for robotic maintenance and reliability.

Course includes: ☑Theoretical ☑ Tutorial ❑ Laboratory ❑ Workshop ❑ Site Visit

Course Prerequisites:

- Engineering Bachelor's degree from an accredited institute

Who should attend:

People interested of knowing Robots & Robotics

Training Course Information form

Course References:

78. The Robotics Revolution by Peter B. Scott, New York, U.S.A.
79. Any other references (AAST Library)

No. of Participants/course: ❑5-10 ❑10-15 ☑15-20 ❑Other: ----------

Qualifications of Participants:

B.Sc. Engineering degree

No. of Lecturer: ☑1 ❑2 ❑3

No. of Assistance: ☑1 ❑2 ❑3

Course Facilities

☑ White Board ☑ V. Projector ☑Data show ☑ PC ❑ Manual ❑ Handouts
❑ Books ❑Flip charts ☑ S/W ❑Other: -FPGA tool kit----------

Course Evaluation

☑ Written Examination ☑ Written Report(s) ❑ Oral Presentation ☑ Attendance
❑ Delegates Participation

Certificate Issue: ❑ Local Premises ☑ AASTMT ❑ International

Course Registration

Registration: ■AAST Admission Registration ❑ Online ❑ Other: ----------

Sponsor: ❑ Individual ❑ Funded By: 10000 L.E. Egyptian Company

Fee's: ❑ L.E. 800 For Egyptian ❑ $ 200 For non Egyptian ❑ Other: 3000 $ Non Egyptian Company

Documents required: ❑ Registration form ■ ID/Passport copy ❑ Photo

Training Course Information form