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# REPORT ON TRAINING NEEDS

For the Members of the Architecture and Engineering Business Council

November 30, 2008

This publication was produced for review by the United States Agency for International Development. It was prepared by Ruba Afana, HR & Training Consultant from Al Jidara, as follow up on the "Training Needs Assessment" report prepared previously by Jonathan S. Lane, Terry Saunders Lane, and Ruba Afana.

# **REPORT ON TRAINING NEEDS**

**FOR THE MEMBERS OF THE ARCHITECTURE AND  
ENGINEERING BUSINESS COUNCIL**

**USAID JORDAN ECONOMIC DEVELOPMENT PROGRAM**

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TRAINING NEEDS ASSESSMENT FOR A & E  
MEMBERS**

**DISCLAIMER:**

*The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.*

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## **1. EXECUTIVE SUMMARY**

### **1.1. ACTIVITY**

This report identifies the training needs for each member firm of the Architecture and Engineering Business Council (AEBC). It includes the training topics each firm needs to include in its training plan for the coming year. The Capacity Building Committee at AEBC will use this report to develop AEBC's annual training plan and to identify suitable training providers. On the other hand, each member firm will be able to manage its own training activities using the output of this assignment.

### **1.2. JUSTIFICATION**

The main objective of the training needs assessment project was to assist the AEBC in developing its training strategy. The Training Needs Assessment report produced earlier by Jonathan Lane, Terry Lane, and Ruba Afana included collective analysis of data for developing the training needs and strategy of the AEBC. It did not include training needs for individual AEBC member firms.

Since the first report did not reveal information on each firm's training needs, the AEBC requested the Program's support in producing individual training needs reports. This assignment along with the findings and recommendations included in the first report will help in building the capacity of the AEBC firms to become more competitive which will help inserting them in the global value chain.

### **1.3. PROJECT METHODOLOGY**

The Consultant used the data collected through the internet survey and interviews conducted in the first phase, to prepare an initial list of training needs for each member firm. In order to help the firms identify training topics under each of the training categories included in the first phase, the Consultant listed common training topics falling under each category and asked the firms to identify the topics that their staff need under each category. The categories included in the first phase were (Technical, Financial, Project Management, Human Resources, Marketing, and Business Development). Out of the 17 firms contacted, 13 firms responded by sending their detailed and revised training needs. The rest of the firms did not respond, therefore, their training needs were not verified or revised, and the same data collected in the first phase is used in this report.

## **2. APPROACH**

### **2.1. PREPARATION OF INITIAL TRAINING NEEDS**

An initial training needs card for each firm was prepared using the data collected from the internet survey and the interviews conducted in the first phase of the project. In addition, training topics under each training category were detailed to help companies identify the training topics needed by their staff.

### **2.2. INDIVIDUAL FIRM SESSIONS**

Sessions were conducted with each AEBC member firms to get additional and detailed information regarding their training needs. Training needs identified by them in the first phase were verified and revised based on a more thorough discussion and analysis of their needs.

### **2.3. ANALYSIS**

Training needs were analyzed per firm resulting in the training topics and the number of employees who need them. Appendices 1 & 2 show results of the analysis.

### 3. FINDINGS

Based on the data collected from the firms, training topics under each training category were identified as follows:

#### 3.1. TECHNICAL SKILLS

Continued training on architecture and engineering technical skills is highly essential for AEBC member firms. Firms need to obtain up-to-date knowledge and skills in the newest architecture and engineering technologies and software. Although the firms participated in several courses covering technical topics, the need to train more people in technical skills is still apparent.

The table below shows training topics needed under the technical skills' category and the number of firms requesting them:

Technical Skills	
Number of Firms by Topic	
Training Topic	Number of Firms
Writing Technical Proposals	8
Green Buildings	7
3D Max & 3D Software	6
Value Engineering	6
Design Management	5
FIDIC Certification	5
High Rise Buildings	5
Water & Energy Conservation Techniques	5

#### 3.2 FINANCIAL SKILLS

The analysis showed that there is a great need for financial management training among AEBC member firms. The level of sophistication needed in financial management varies from one firm to the other depending on the firm's size and the financial system it uses.

The table below shows financial skills topics that were identified as training needs by AEBC members.

Financial Skills	
Number of Firms by Topic	
Training Topic	Number of Firms
Budgeting and Financial Planning	11
Financial Analysis	7
Finance for Non-Financial Managers	6
Budgeting and Cash Flow	5

### 3.3 PROJECT MANAGEMENT SKILLS

Based on the analysis, all firms identified a need to develop their project management skills. It was noted that the specific topics of project management varies depending on the firm's size and complexity of its operations.

The table below summarizes project management skills that were identified as training needs for AEBC member firms:

Project Management Skills	
Number of Firms by Topic	
Training Topic	Number of Firms
PMP certification	13
Project Planning	6
Pricing of Projects	6
Resource Allocation	5
Time Recovery	4

### 3.4 HUMAN RESOURCES SKILLS

Staff turnover is one of the main challenges the architecture and engineering firms are facing. Thus, the analysis indicated a great demand on training courses related to employees' retention. It was noted that some firms have solid human resources policies, strategies and systems while others are still in the early stages of developing such systems.

The table below summarizes human resources management skills that were identified as training needs by AEBC member firms:

Human Resources Management Skills	
Number of Firms by Topic	
Training Topic	Number of Firms
Employee Retention	11
Career Path & Succession Planning	8
Selection & Recruitment	7
HR Policies & Strategies	7
Job Analysis & Job description	7
Performance Appraisal	6
Organizational Structure	6

### 3.5 BUSINESS DEVELOPMENT, MARKETING, AND WORKPLACE PREPARATION SKILLS

Presentation skills were identified as the most common training need among AEBC member firms under the business development category.

Training needs of AEBC member firms under the Business Development category, Marketing, and Workplace Preparation Skills are summarized in the table below:

Business Development, Marketing and Workplace Skills	
Number of Firms by Topic	
Training Topic	Number of firms
Presentation Skills	9
Leadership & Motivation	7
Analytical Thinking	7
Communication	7
Marketing Research & Market Plan	7
Team Building	6
Time Management	5
Customer Relationship Management (CRM)	5
Market Strategy	5
English Language	5
Basics of Marketing	5

## 4. RECOMMENDATIONS

Based on the finding of this assignment, the AEBC is recommended to take the following actions:

1. Conducting further analysis on the training needs identified for each firm. This further analysis should include determining the needed proficiency level of each topic/skill (basic, intermediate or advanced) and consequently defining the exact training courses needed.
2. Identifying local training providers capable of providing customized training courses for AEBC member firms.
3. Identifying international training providers-as needed- for specialized technical topics. The AEBC should ensure that the identified international training providers are willing to customize their training materials and tools to the needs of the Jordanian Architecture and Engineering market.
4. Considering on-line training providers as a cost effective training tool.

### **Follow up by the USAID Jordan Economic Development Program (SABEQ)**

The Workforce Development Team in collaboration with the Program's Monitoring and Evaluation Specialist will be tracking the progress and impact of this assignment on certain aspects of the AEBC and firms performance.

The Workforce Development Team will monitor the progress related to the implementation of the AEBC of the recommendations of this report and the report produced earlier by Jon Lane, Terry lane and Ruba Afaneh. Moreover, the Monitoring and Evaluation Specialist with the support of the Workforce Development Team will track the impact of the project based on key performance indicators and according to a well-defined timeframe and will report quarterly.

## **APPENDIX 1 - INDIVIDUAL TRAINING NEEDS FOR MEMBER FIRMS OF ARCHITECTURE AND ENGINEERING BUSINESS COUNCIL**

**AEBC Member Firm: TIBAH Consultants**

**Total Employees** 36

**Amman office** 24

**Mix of work** Architecture, construction management and engineering consultancy

**Training** Non systematic - Most training is done through JEA

Training Categories	Training suggestions of the firm from interview and survey	Suggested Number of employees
<b>Technical Skills</b>	High rise buildings	3
	Steel structure	3
	3D Max	3
	Green buildings	2
	Quality control measurement	2
	Writing technical proposals	4
	Environment & water issues	2
	Quality control & quality assurance	2
	Design innovations and techniques	3
	Construction management	1
	Water & energy conservation techniques	1
	Design management	2
	Value engineering	1
	Earthquakes resisting buildings	3
	FIDIC certification	1
Site management & site operation	2	
Finite Element Design software	3	
<b>Financial Management Skills</b>	Finance for non-financial managers	2
	Financial analysis	2
	Budgeting & Cash flow	1
	Valuations & Acquisitions	1
	Integrated cost system	1
	Budgeting & financial planning	1
<b>Project Management Skills</b>	PMP	2
	Project cost control	2
	PM tools	2
	Quality control	1
	Project planning	3
	Pricing of projects	2
	Time recovery	1
	Resource allocation	2

Training Categories	Training suggestions of the firm from interview and survey	Suggested Number of employees
<b>Human Resource Management Skills</b>	Competency model	1
	Career path & succession planning	1
	Competency based appraisal	1
	Selection and recruitment	1
	Employee retention	1
	HR policies & strategies	1
	Performance appraisal	1
	Training management	1
	Organizational structure	1
	Job analysis & job descriptions	1
Incentives and rewarding	1	
<b>Business Development, Marketing, and Workplace Preparation Skills</b>	Presentation Skills	2
	Time Management	3
	Leadership & motivation	2
	Customers Relationship Management (CRM)	1
	Analytical thinking	3
	Communication	3
	Team building	3
	Marketing Skills	2
	Mergers, acquisitions & joint ventures	1
	Marketing research & plan	1
	Negotiation skills	2
	Market analysis	1
	Writing business plans	1
	Market strategy	1
	English language	3
	Typing skills for engineers	3
	Body language	3
Basics of marketing	2	

**AEBC Member Firm:**

**Sigma- Consulting Engineers**

**Total Employees**

300

**Amman office**

200

**Mix of work**

Building architecture and supervision

**Training**

No training plan or strategy

Training Categories	Training suggestions of the firm from interview and survey	Suggested Number of employees*
<b>Technical Skills</b>	Engineering software Writing technical proposals Design innovations and techniques AutoCAD management	
<b>Financial Management Skills</b>		
<b>Project Management Skills</b>		
<b>Human Resource Management Skills</b>	Employee retention Selection and recruitment	
<b>Business Development, Marketing, and Workplace Preparation Skills</b>		

\* N.A.

**AEBC Member Firm:**

**Faris Bagaeen**

**Total Employees**

27

**Amman office**

18

**Mix of work**

Architecture and engineering work

**Training**

Non-systematic and based on employees requests and managers decision on new staff

Training Categories	Training suggestions of the firm from interview and survey	Suggested Number of employees
<b>Technical Skills</b>	Drafting	3
	3D software	3
	Writing technical proposal	3
<b>Financial Management Skills</b>	Financial control & analysis	1
<b>Project Management Skills</b>	PMO	2
	Project planning	5
<b>Human Resource Management Skills</b>	Selection and recruitment	2
	Career path & succession planning	2
	Incentives and rewarding	2
	Job descriptions	2
<b>Business Development, Marketing, and Workplace Preparation Skills</b>	Communication	4
	Customer relationship management	4

**AEBC Member Firm: Engicon**

**Total Employees** 220

**Amman office** 150

**Mix of work**

**Training** Circulars from AEBC or adds in the newspaper for training courses - Supervisors decide

Training Categories	Training suggestions of the firm from interview and survey	Suggested Number of employees *
<b>Technical Skills</b>	Green buildings 3D software	
<b>Financial Management Skills</b>	Budgeting & cash flow forecasting Project cost control	
<b>Project Management Skills</b>	PMP PMO	
<b>Human Resource Management Skills</b>	Performance appraisal Selection and recruitment Training management	
<b>Business Development, Marketing, and Workplace Preparation Skills</b>	Presentation Skills Leadership & motivation Marketing research & plan	

\* N.A.

**AEBC Member Firm:**

**Dar Al Omran**

**Total Employees**

285

**Amman office**

185

**Mix of work**

Architecture and engineering work

**Training**

Systematic based on annual evaluation and approval of supervisor

Training Categories	Training suggestions of the firm from interview and survey	Suggested Number of employees
<b>Technical Skills</b>	Writing and revising technical contracts	8
	Value engineering	5
	Construction management	4
	Site management & site operation	4
<b>Financial Management Skills</b>	Budgeting & Cash flow	2
	Integrated cost system	2
	Budgeting & financial planning	2
<b>Project Management Skills</b>	PMP certification	5
	Teamwork	8
	Quality control	8
	Pricing of projects	3
<b>Human Resource Management Skills</b>	Succession planning	3
	Contingency Planning	6
	Competency based appraisal	2
	HR policies & strategies	2
	Performance appraisal	2
	Organizational structure	3
	Job analysis & job descriptions	3
<b>Business Development, Marketing, and Workplace Preparation Skills</b>	Communication	8
	Presentation skills	8
	Body language	8
	Analytical thinking	8
	Marketing basics	8
	English Language	30

**AEBC Member Firm: Consulting Engineering Center (Sajdi & Partners)**

**Total Employees** 180

**Amman office** 50

**Mix of work** Engineering, Infrastructure (water, environment and transportation)

**Training** Annual process

Training Categories	Training suggestions of the firm from interview and survey	Suggested Number of employees
<b>Technical Skills</b>	Environment & water issues	8
	Water & energy conservation	5
	Civilcad 3D software	12
	Writing technical proposals	N.A.
<b>Financial Management Skills</b>	Valuations & acquisitions	4
<b>Project Management Skills</b>		
<b>Human Resource Management Skills</b>	Career path & succession planning	5
	Selection & recruitment	N.A.
	Employee retention	N.A.
	HR strategies	N.A.
<b>Business Development, Marketing, and Workplace Preparation Skills</b>	Presentation skills	12
	Analytical thinking	12
	Marketing research & plan	6
	Marketing analysis	6
	Market strategy	6
	Communication	N.A.
	Team building	N.A.

**AEBC Member Firm: Consolidated Consultants**

**Total Employees** 550  
**Amman office** 300  
**Mix of work** Engineering, Architecture, Multi-discipline  
**Training** Annual process

Training Categories	Training suggestions of the firm from interview and survey	Suggested Number of employees
<b>Technical Skills</b>	High rise buildings	10
	Steel structure	5
	3D Max	20
	Green buildings	5
	Quality control measurement	15
	Writing technical proposals	10
	Quality control & quality assurance	15
	Water & energy conservation techniques	10
	Design management	30
	Value engineering	15
	Site management & site operation	5
	Earthquakes resisting buildings	5
	FIDIC certification	20
<b>Financial Management Skills</b>	Finance for non-financial managers	20
	Financial analysis	5
	Budgeting & Cash flow	5
	Budgeting & financial planning	5
	Specialized topics in office and project financial management	5
<b>Project Management Skills</b>	Contracts, Subcontracts, and Relationship to Projects	15
	Project Management Basics	50
	Project Management Tools and Software	50
	Project cost control	25
	Pricing of projects	20
	Resource allocation	25
	Project planning	25
	PMP	50
<b>Human Resource Management Skills</b>	HR Reports & analysis	5
	Performance Evaluation Processes and Methods	15
	Employee Retention, Incentives, and Recognition	5
	Training management & impact assessment	5
	Career path, promotion, and succession in the A/E industry	25

Training Categories	Training suggestions of the firm from interview and survey	Suggested Number of employees
<b>Business Development, Marketing, and Workplace Preparation Skills</b>	Marketing research & plan	2
	Introduction to Marketing for A/E Firms	2
	Brand basics & management	2
	Advanced Marketing Techniques and Case Studies	2
	Communication skills	30
	Analytical thinking	30
	Team building	30
	Time management	30
	Presentation Skills	30
	Action planning	50
	English	75
	report writing	50
	problem solving & issue management	50
	motivation	25
	supervisory skills	25
	Coaching, mentoring & facilitation	25

**AEBC Member Firm: Arabtech Jerdaneh**

**Total Employees** 350

**Amman office** 160

**Mix of work** Architecture and engineering work

**Training** Systematic based on annual evaluation and approval of supervisor

Training Categories	Training suggestions of the firm from interview and survey	Suggested Number of employees
<b>Technical Skills</b>	High Rise Buildings	7
	Earthquakes resisting buildings	2
	Green buildings	7
	Value engineering	4
	FIDIC certification	4
	Power Engineering	1
	Urban Planning	2
<b>Financial Management Skills</b>	Valuations and Acquisitions	2
	Budgeting and Financial Planning	2
<b>Project Management Skills</b>	PMP	4
	Resource Allocation	2
	Risk Management	2
<b>Human Resource Management Skills</b>	Career Path and Succession Planning	1
	Job Analysis and Job Description	1
	Competency Based Appraisal	1
<b>Business Development, Marketing, and Workplace Preparation Skills</b>	Mergers, Acquisitions and joint Ventures	2
	Market Research and Planning	2

**AEBC Member Firm: Arab Center for Engineering Studies**

**Total Employees** 1300 - including field offices and offices outside Jordan

**Amman office** 140

**Mix of work** Civil Engineering specialized in geotechnical engineering and materials testing

**Training** Based on annual evaluation process

Training Categories	Training suggestions of the firm from interview and survey	Suggested Number of employees
<b>Technical Skills</b>	Drilling techniques and safety	3
	Quality control & quality assurance	3
	Writing technical proposals	3
<b>Financial Management Skills</b>	Financial analysis	3
	Valuations & Acquisitions	3
	Budgeting & financial planning	3
<b>Project Management Skills</b>	Pricing of projects	3
<b>Human Resource Management Skills</b>	Career path & succession planning	3
	Selection and recruitment	3
	Employee retention.	3
	Performance appraisal	3
	Incentives and rewarding	3
<b>Business Development, Marketing, and Workplace Preparation Skills</b>	Customers Relationship Management (CRM)	3
	Mergers, acquisitions & joint ventures	3
	Market strategy	3

**AEBC Member Firm: Amman Consulting Engineering**

**Total Employees** 130

**Amman office** 20

**Mix of work** Infrastructure for industrial cities and design and supervision of large projects

**Training** Based on employees requests and supervisors' approval

Training Categories	Training suggestions of the firm from interview and survey	Suggested Number of employees
<b>Technical Skills</b>	Green buildings	3-4
	Environmental issues	2
	Quality control & quality assurance	2
<b>Financial Management Skills</b>	Budgeting & Cash flow	1-2
	Budgeting & Financial planning	1-2
<b>Project Management Skills</b>	PMO	1
<b>Human Resource Management Skills</b>	Employee retention	1-2
	HR policies & procedures	1-2
	HR basics	1-2
<b>Business Development, Marketing, and Workplace Preparation Skills</b>	Leadership & motivation	1-2
	Analytical thinking	1-2

**AEBC Member Firm:**

**Al- Baha Consulting Engineers**

**Total Employees**

60

**Amman office**

35

**Mix of work**

Consultancy in engineering, buildings, architecture, electrical and project management

**Training**

Training plan based on semi-annual evaluation

Training Categories	Training suggestions of the firm from interview and survey	Suggested Number of employees
<b>Technical Skills</b>	FIDIC certification	1-2
	Design management	3-4
	High rise buildings	2
	Design innovations & techniques	3-4
	Value engineering	1-2
<b>Financial Management Skills</b>	Finance for non-financial managers	1-2
	Budgeting & financial planning	1-2
<b>Project Management Skills</b>	Project planning	1-2
	PMP certification	1
	Pricing of projects	1-2
	Time recovery	1-2
	Resource allocation	1-2
<b>Human Resource Management Skills</b>	Competency model	1
	Selection and recruitment	1
	HR policies & strategies	1
	Organizational structure	1
	Job analysis & job description	1
	Incentives and rewarding	1
<b>Business Development, Marketing, and Workplace Preparation Skills</b>	Time management	1
	Leadership & motivation	1
	Analytical thinking	1
	Team building	1
	Marketing skills	1
	Writing business plans	1
	Negotiation skills	1
	Market analysis	1
	Market strategy	1
	English language	3-5
	Basics of marketing	1

**AEBC Member Firm: Associated Consulting Engineers (ACE)**

**Total Employees** 100  
**Amman office** 40  
**Mix of work** Buildings, roads and water  
**Training** Non systematic - Training is based upon employees' requests

Training Categories	Training suggestions of the firm from interview and survey	Suggested Number of employees
<b>Technical Skills</b>	Construction management	1
	Design Management	1
	Value Engineering	2
	Quality Control Measurement	1
<b>Financial Management Skills</b>	Finance for non-financial managers	1
	Budgeting and financial planning	1
<b>Project Management Skills</b>	PMP	3
	Project Planning	1
<b>Human Resource Management Skills</b>	Job analysis & job description	1
	Employee retention	1
<b>Business Development, Marketing, and Workplace Preparation Skills</b>	Marketing skills	1
	Leadership	1
	Time management	1
	Writing business plans	1

**AEBC Member Firm: ECO Consult**

**Total Employees** varies

**Amman office** 15-20

**Mix of work**

**Training** Training is based on semi annual evaluation by supervisors

Training Categories	Training suggestions of the firm from interview and survey	Suggested Number of employees *
<b>Technical Skills</b>	Water & energy conservation techniques	
	Environment & water issues	
<b>Financial Management Skills</b>	Financial analysis	
	Budgeting & financial planning	
	Finance for non-financial managers	
	Integrated cost system	
<b>Project Management Skills</b>	PMP	
	PM tools	
	Pricing of projects	
<b>Human Resource Management Skills</b>	Competency model	
	Career path & succession planning	
	Competency based appraisal	
	Employee retention	
	HR policies & strategies	
	Training management	
	Organizational structure	
<b>Business Development, Marketing, and Workplace Preparation Skills</b>	Presentation Skills	
	Leadership & motivation	
	Customers Relationship Management (CRM)	
	Analytical thinking	
	Communication	
	Team building	
	Mergers, acquisitions & joint ventures	
	Marketing research & plan	
	Negotiation skills	
	Market analysis	
	Market strategy	
	Body language	
	Basics of marketing	

\* N.A.

**AEBC Member Firm: Bitar Consultants Architects \***

**Total Employees** 125  
**Amman office** 60  
**Mix of work** Buildings  
**Training** Non systematic - Supervisors request training for their employees

**This plan is prepared without the feed back of the firm**

Training Categories	Training suggestions of the firm from interview and survey	Suggested Number of employees **
<b>Technical Skills</b>	Writing technical proposals Water & energy conservation techniques	
<b>Financial Management Skills</b>	Financial analysis	
<b>Project Management Skills</b>	PMO	
<b>Human Resource Management Skills</b>	Employee retention	
<b>Business Development, Marketing, and Workplace Preparation Skills</b>	Communication English language Typing skills for engineers Time Management Marketing plan Presentation skills	

\* This plan is prepared without the feed back of the firm

\*\* N.A.

**AEBC Member Firm:** Faris & Faris Architects \*

**Total Employees** 35

**Amman office** 24

**Mix of work** Architecture

**Training** Non-systematic and based on employees requests and managers decision on new stuff

**This plan is prepared without the feed back of the firm**

Training Categories	Training suggestions of the firm from interview and survey	Suggested Number of employees **
<b>Technical Skills</b>	Specialized courses in Architect Design management	
<b>Financial Management Skills</b>	Budgeting & financial planning Understanding multipliers Financial analysis	
<b>Project Management Skills</b>	PMO Project planning Time recovery Resource allocation	
<b>Human Resource Management Skills</b>	Organizational structure Employee retention Performance appraisal	
<b>Business Development, Marketing, and Workplace Preparation Skills</b>	CRM Writing business plans	

\* This plan is prepared without the feed back of the firm

\*\* N.A.

**AEBC Member Firm:**                    **Sobeh Consulting Engineering \***

**Total Employees**                    120

**Amman office**                            30

**Mix of work**                            Architecture and engineering services

**Training**                                Non systematic - Training on new issues for seniors

**This plan is prepared without the feed back of the firm**

Training Categories	Training suggestions of the firm from interview and survey	Expected Number of employees **
<b>Technical Skills</b>	Defining project requirements Tendering / Contracting Green buildings	
<b>Financial Management Skills</b>	Finance for non-financial managers	
<b>Project Management Skills</b>	Project Management	
<b>Human Resource Management Skills</b>	Employee retention	
<b>Business Development, Marketing, and Workplace Preparation Skills</b>	Presentation skills Marketing skills	

**\* This plan is prepared without the feed back of the firm**

\*\* N.A.

**AEBC Member Firm:** **Maisam \***

**Total Employees** 50

**Amman office** 45

**Mix of work** Architecture design & consulting services

**Training** Non-systematic based on ads and invitations

Training Categories	Training suggestions of the firm from interview and survey	Suggested Number of employees **
<b>Technical Skills</b>	FIDIC certification Advanced software in Arch. Green buildings (LEED certificate) 3D Max & Photoshop & CAD Eartquake design High rise buildings Site mgt. & site operation Finite Element Design software	
<b>Financial Management Skills</b>	Financial reporting Finance for engineering sector	
<b>Project Management Skills</b>	PMP certification Titme management for projects	
<b>Human Resource Management Skills</b>	Need consultancy to set HR strategy & policy & HR manual	
<b>Business Development, Marketing, and Workplace Preparation Skills</b>	Marketing skills Presentation skills	

\* This plan is prepared without the feed back of the firm

\*\* N.A.

## APPENDIX 2- SUMMARY OF TRAINING NEEDS FOR MEMBER FIRMS OF ARCHITECTURE AND ENGINEERING BUSINESS COUNCIL

	Al- Baha Consulting Engineers	Amman Consulting Engineering	Arab Center for Engineering Studies	Arabtech- Jardaneh Engineers&Architects	Associated Consulting Engineers (ACE)	Consolidated Consultants	Consulting Engineering Center(Sajdi & Partners)	Dar- Al-Omran	ECO Consultant	Engicon	Faris Bagaeen Office	Sigma- Consulting Engineers	TIBAH Consultants ARCHs, ENGS	Blitar Consultants Architects	Faris& Faris Architects	Sobeh Consulting Eng. Office	Maisam Architects& Engineers
<b>Technical Skills</b>																	
High rise buildings	2			7		10							3				√
Steel structure						5							3				
3D Max & 3D Software						20	12			√	3		3				√
Green buildings		4		7		5				√			2				√
Quality control measurement					1	15							2				
Writing technical proposals			3			10	√	8			3	√	4	√			√
Environment & water issues		2					8		√				2				
Quality control & quality assurance		2	3			15							2				
Design innovations and techniques	4											√	3				
Construction management					1			4					1				
Water & energy conservation techniques						10	5		√				1	√			
Design management	4				1	30							2		√		
Value engineering	2			4	2	15		5					1				
Earthquakes resisting buildings				2		5							3				√
FIDIC certification	2			4		20							1				√
Site management & site operation						5		4					2				√
Finite Element Design software													3				√
Autocad management												√					
Drafting											3						
Geographic Information System (GIS)									√								
Power Engineering				1													
Urban Planning				2													
Drilling Techniques & Safety			3														
Architecture Software															√		√
Tendering/ Contracting																√	

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	Al- Baha Consulting Engineers	Amman Consulting Engineering	Arab Center for Engineering Studies	Arabtech- Jardaneh Engineers&Architects	Associated Consulting Engineers (ACE)	Consolidated Consultants	Consulting Engineering Center(Sajdi & Partners)	Dar- Al-Omran	ECO Consultant	Engicon	Faris Bagaean Office	Sigma- Consulting Engineers	TIBAH Consultants ARCHs, ENGS	Bitar Consultants Architects	Faris& Faris Architects	Sobeh Consulting Eng. Office	Malsam Architects& Engineers
<b>Financial Skills</b>																	
Finance for non-financial managers	2				1	20			√				2			√	
Financial analysis			3			5			√		1		2	√	√		
Budgeting & Cash flow		2				5	2		√				1				
Valuations & Acquisitions			3	2			4						1				
Integrated cost system							2	√					1				
Budgeting & financial planning	2	2	3	2	1	5	2	√					1		√		
Financial Reporting																	√
<b>Project Management Skills</b>																	
PMP	1	1		4	3	50	5	√	√	2			2	√	√		√
Project cost control						25			√				2				
PM tools						50			√				2				
Quality control							8						1				
Project planning	2				1	25					5		3		√		
Pricing of projects	2		3			20	3	√					2				
Time recovery	2												1		√		√
Resource allocation	2			2		25							2		√		
Project Financial Management						5											
Contracts, Subcontracts, and Relationship to Projects						15											
Project Management Basics						50											√
Risk Management				2													
Defining Project Requirements																√	

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<b>Human Resources Skills</b>																	
Competency model	1								√				1				
Career path & succession planning			3	1		25	5	3	√		2		1				
Competency based appraisal				1				2	√				1				
Selection and recruitment	1		3				√			√	2	√	1				
Employee retention		2	3		1	5	√		√			√	1	√	√	√	
HR policies & strategies	1	2					√	2	√				1				√
Performance appraisal			3			15		2		√			1		√		
Training management						5			√	√			1				
Organizational structure	1							3	√				1		√		√
Job analysis & job descriptions	1			1	1			3			2		1				√
Incentives and rewarding	1		3			5					2		1				
Contingency Planning								6									
HR Basics		2															√
<b>Business Development &amp; Marketing Skills</b>																	
Presentation Skills						30	12	8	√	√			2	√		√	√
Time Management	1				1	30							3	√			
Leadership & motivation	1	2			1	25			√	√			2				
Customers Relationship Management (CRM)			3						√		4		1		√		
Analytical thinking	1	2				30	12	8	√				3				
Communication						30	√	8	√		4		3	√			
Team building	1					30	√	8	√				3				

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Marketing Skills					1								2				
Mergers, acquisitions & joint ventures			3	2					√				1				
Marketing research & plan				2		2	6		√	√			1	√			
Negotiation skills	1								√				2				
Market analysis	1						6		√				1				
Writing business plans	1				1								1		√		
Market strategy	1		3				6		√				1				
English language	5					75	30						3	√			
Typing skills for engineers													3	√			
Body language							8	√					3				
Basics of marketing	1					2	8	√					2				
Advanced Marketing Techniques						5											
Action Planning						50											
Writing Reports						50											
Problem Solving						50											
Supervisory Skills						25											
Coaching & Mentoring						25											

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