

## Six Month Diploma in

### “Productivity & Quality Management”

With Major in Lean Manufacturing” especially for RMG Sector

#### Rationale

The readymade garment sector (RMG) is the hub of the economy of Bangladesh, accounting for more than 78 percent of the country's total export earnings. It is likely that the future economic development of Bangladesh will be highly correlated with this sector's performance.

Presently, the RMG sector faces critical operational challenges due to rising production costs and decreasing product prices and increasing the wage scale. Consequently, efficient utilization of existing resources and workforce are paramount to improve management structure, productivity and competitiveness. Better utilization of resources are closely linked with qualified management personnel, such as industrial engineer, production manager, Productivity and Quality Manager and Method Study Executive/ Engineer.

Pilot projects were undertaken with BGMEA and BKMEA to improve productivity in their member factories showed that there are big shortage of professionals who are capable of carrying out activities for improvement of productivity within the factories. That is why GIZ decided to support Bangladesh Institute of Management (BIM) to run a diploma course on “Productivity and Quality Management specially for RMG sector” to develop such type of professionals for the garment industry.

#### Course Description

The diploma in **Productivity & Quality Management** with Major in Lean Manufacturing is designed to suit the requirements of Production Managers/ Officer, Industrial Engineer, Method Study Officer, Productivity & Quality related Manager/ Officer and also for those who wish to build a career in a profession which demands in-depth knowledge on Productivity, Quality, Lean Manufacturing & Method study related issues. The course has a focus on production, productivity, lean manufacturing & quality needs of the export sector industries specially for RMG sector industries and a strong practical orientation. Apart from class room sessions, participants have to do a project work in the productivity lab of BIM and/ or in any factory during which they will learn how to design & implement systematic productivity, quality and lean manufacturing system. At the end of the program participants have to submit a project based internship report on initial findings, recommendations and progress

achieved. This internship will allow participants to gain a hands-on lean experience at factory level.

#### COURSE OBJECTIVES :

The course aims to equip participants with knowledge and skills needed to:

Identify and solve quality, productivity and lean manufacturing related problems at the workplace  
ii) Build expertise in Productivity & Quality.  
Build career as a productivity, quality and lean Manager/ Officer/ Engineer for Garment and other export oriented industries.

To increase plenty of productivity and quality professionals to the RMG sector.

To reduce the dependency of this area from foreign expert and to develop sustainable local expert pool for this sector.

#### COURSE OUTLINE :

##### Part-I

#### a) HRM, OB & Social Compliance :

- \* Introduction to Management;
- \* HRM : Its nature, Scope, Functions & Objective
- \* Understanding Human Behaviour, Leadership and Team Building,
- \* Communication etc.
- \* Understanding Social Compliance in the global context.
- \* Corporate Social Responsibility (CSR),
- \* Total Quality Management,
- \* Innovation & Creativity in garment related profession.

#### b) Introduction to Garment Manufacturing:

- \* Introduction to fashion and clothing industry
- \* Supply Chain management in Apparel industry
- \* Clothing materials and technique
- \* Cutting room technology
- \* Sewing technology
- \* Garment construction technique
- \* Fiber-yarn-fabric
- \* Dying, printing & Finishing

#### c) Garment Production Management:

**Production planning and control:** (Introduction, Necessity for PPC, Main function of PPC, Information required for PPC, Bill of Material, MRP,ERP, loading, Sequencing, and Gantt Chart Scheduling

**Process Planning:** (Machine requirement, M/C output, Manpower planning, Line balancing)

**Inventory Control:** (Introduction, Selective control of inventory e.g. Activity Based Costing (ABC) in the garments), EOQ (Economic Order Quantity)

Demand forecasting (Necessity of forecasting, classification, application in the garments industry)

#### Production cost concept and break even analysis:

(Cost of garments production, Analysis of production cost, Break even analysis, method of lowering BEP, cost volume analysis

**General Management:** Basic function of management (planning, Organizing , leading , Controlling), HR-Skill matrix, **Operator Skill Matrix, Incentive System.** Motivation (Different theories of Motivation like Maslow's hierarchy, Heisenberg, Inequality theory), Leadership (Different types of leadership style like transformational, transition leader), Communication (Presentation skills, communication approach and model), IT (Microsoft office).

#### d) Garments Quality Management:

- Principles and Practice: (Introduction, Understanding Quality, Quality Control & Quality Assurance, Benefits of Quality, customer satisfaction. 8 Dimensions of Quality, Quality Control Organogram).
- Application of quality control of Clothing Materials used in garments Manufacturing: ( Identification of Defects of fabric, Trims & accessories)
- **Standard inspection Procedure of Fabric & all others Trims and Accessories used in garments.**(Theoretical , VIDEO presentation & practical with Materials in the class room.)
- **Understanding Quality Specification** of Garments & Materials.
- **Standard procedure and practices** of garment Measurement (Theoretical & Practical in the class room).
- Zone classification of garments.
- Identification of Garment Defects, Classification of Defects, Prevention & Rectification of defects (Theoretical & practical through VIDEO & Materials in the class room)
- **Section wise Quality Control Activities** in Garment Industry & Quality Control activities in other value adding process in garment manufacturing ( Fusing, printing, Embroidery, Washing etc.) , Theoretical , Practical & Video presentation.
- **Available Quality Control Systems** are in practice in Sewing Department including Traffic Light system.
- **Statistical procedure of Final Audit & AQL chart.**
- **RCA & Quality Control Tools:** (Cause-Effect analysis, Peroto analysis, 7 QC tools etc.)
- **5S system & its implementation** in garment industry (Theoretical & video presentation)
- **Quality Assurance & TQM**
- Garment Factory visit and Report submission (Woven, Cut & sew knit & Fully fashion Garment Industry)

Production planning and control: (Introduction, Necessity for PPC, Main function of PPC, Information required for PPC, Bill of Material, MRP, ERP, loading, Sequencing, and Scheduling  
Process Planning: (Machine requirement, M/C output, Manpower planning, Line balancing  
Inventory Control: (Introduction, Selective control of inventory e.g. Activity Based Costing (ABC) in the garments)

#### e) **Industrial Engineering:**

##### **Concept of Industrial Engineering**

IE Definition, Production and Productivity, Benefit from Productivity.

Productivity Measures, Productivity measures models  
Factor influencing productivity, Productivity improvement technique.

##### **Work & Method Study**

Concept of Work Study, Importance, Component of Work study.

Relation between Work study and Work measurement

Relation between work study and productivity.

Concept of Method study, Definition, Scope of method study

Steps involved in method study, method study symbols, Operation process chart.

##### **Work Measurements emphasizes on SMV Calculation.**

Work measurement, Time study, Rating, Allowances, SMV calculation with time study.

SMV calculation with Standard Sewing Data (SSD) techniques.

##### **Work Place Design & Plant layout.**

Concept Of Plant lay out, Definition, Objective, Relation between layout and productivity

Principles of layout, Factors affecting the layout, Types of production and layout

Steps and Method of line layout in garments industry)

##### **Job evaluation and merit rating, Wages and Incentives Ergonomics**

#### f) **Lean Manufacturing:**

##### **Value Stream Mapping**

Waste Identification & its impact on Industry.

Relation of Waste To Profit & Loss.

Kaizen, Workplace Organization/5s.

Quick Changeover/Set Up Reduction, Pull Concept, JIT, KANBAN,

Total Productive Maintenance,

Cellular Manufacturing,

One Piece Flow, Visual Control,

Takt Time, Team Building, Balanced Flow,

Quality At The Source, Mistake Proofing, Standardized Work.

#### **Part-II : Internship/ Project/ Practical work in Laboratory or Factory**

##### **TRAINING METHODOLOGY:**

Lecture, Presentation, Group Discussion, Case Study, Self-Assessment, and other participatory methods of training.

##### **WHO SHOULD ATTEND?**

This course is designed for Production, Productivity, Lean Manufacturing, Merchandizing and Work Study related Managers/ Officers working in the Ready Made Garment and Textile sector and other export-oriented production companies. It is also suitable for Textile and Industrial Engineers and technical Consultants/ Managers/ Officers working in the RMG & Textile sector. This course is also suitable but seems to be difficult for people not with relevant pre-knowledge or experience but wishes to develop their career in this area.

**The educational requirement for this program is at least graduation. Persons having diploma in any branch of engineering/technology along with 4 years experience are also eligible for admission.**

##### **COURSE FEE:**

1. Last date of admission: **11 December, 2019**
2. The candidate need to complete the admission process through deposit of full course fee **Tk. 36,500/- (Thirty Six Thousand five hundred)** only per participant in favour of **Director General, BIM.**
3. To complete the admission process all participants need to submit their full particulars in Prescribed Form along with 03 (three) color pp size photo and attached copy of all certificates, NID and documents.

##### **DURATION & TIMING**

**Duration: Six Months**

**Class Days : only Friday**

**Timing : 09:00 am – 06:00 pm**

##### **VENUE:**

**BIM, DHAKA CAMPUS,  
4 Sobhanbag, Mirpur Road, Dhaka 1207.**

#### **ADMISSION DEADLINE : 11 DECEMBER, 2019**

The consultants hired by GIZ designed the course curriculum in consultation with sectoral experts and other stakeholders.

The course is designed to develop the professional knowledge and skills required to:

implement industrial engineering tools and techniques in garments factory

- develop production and quality related planning & control.
- minimize waste by integrating tools and techniques of lean manufacturing.

Design the quality according to the customer requirements.

The Program is designed with an extraordinary pool of academician and also practitioner with hands-on experience in lean management.

Participants of this diploma course will get the opportunity to use the Productivity Lab to gain more practical knowledge on time study, line balancing, quality control etc.

The course focuses primarily on Lean Manufacturing Techniques and includes topics related to soft skills, such as social compliance, leadership and communications.

##### **For more information, please contact:**

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