(12)

Department of Spinning, Weaving and Knitting

Table No. (91) Department:Spinning, Weaving and Knitting Department No. (12)

First Year First Semester

No.	Code No.	Course Title	Number of Weekly Hours			Marks Distribution				Exam Hours
			Lecture	Lesson	Total	Semester Work Marks	Discussion/ Oral	Written	Total	
1	1101	Weaving Design Basics	1	3	4	-	20	-	20	Extended
2	1102	Simple Fabrics Design	-	6	6	-	60	-	60	Extended
3	1106	Weaving Structures	2	2	4	20	20	60	100	2
4	1110	Weaving Materials	2	2	4	20	20	60	100	2
5	1116	History of Textiles	2	2	4	20	20	60	100	2
6	1118	Industrial Organization	2	-	2	10	10	30	50	2
7	1501	Chemistry	1	2	3	15	15	45	75	2
8	1502	Nature	1	2	3	15	15	45	75	2
9	1405	Geometric Perspective	1	3	4	20	20	60	100	2
10	1602	Languages	2	-	2	10	10	30	50	2
Total Weekly Hours			14	22	36	Total Marks			730	

Table No. (92) Department:Spinning, Weaving and KnittingDepartment No. (12)

First Year Second Semester

No.	Code No.	Course Title	Number of Weekly Hours			Marks Distribution				Exam Hours
			Lecture	Lesson	Total	Semester Work Marks	Discussion/ Oral	Written	Total	
1	1101	Weaving Design Basics	1	3	4	-	30	-	30	Discussion
2	1102	Simple Fabrics Design	-	6	6	-	90	-	90	Discussion
3	1107	Textiles Analysis	2	1	3	20	20	60	100	2
4	1108	Production Engineering (Preparations)	2	2	4	20	20	60	100	2
5	1111	Weaving Mathematics	2	2	4	20	20	60	100	2
6	1109	Fibers Chemistry	2	1	3	20	20	60	100	2
7	1403	Computer	1	3	4	20	20	60	100	2
8	1503	Mathematics	2	-	2	10	10	30	50	2
9	1306	Still Nature	-	4	4	-	100	-	100	Discussion
10	1603	History of Arts	2	-	2	10	10	30	50	2
Total Weekly Hours			14	22	36	Total Marks			820	

Table No. (94) Department:Spinning, Weaving and KnittingDepartment No. (12)

Second Year First Semester

No.	Code No.	Course Title	Number of Weekly Hours			Marks Distribution				Exam Hours
			Lecture	Lesson	Total	Semester Work Marks	Discussion/ Oral	Written	Total	
1	2103	Dobby Fabrics Design	-	6	6	-	60	-	60	Extended
2	2113	Carpets Production Technology	1	3	4	20	20	60	100	2
3	2114	Knitting Production Technology	1	3	4	20	20	60	100	2
4	2120	Dyeing and Finishing	2	4	6	10	10	30	50	2
5	2112	Spinning	2	2	4	20	20	60	100	2
6	2502	Nature	1	2	3	15	15	45	75	2
7	2501	Chemistry	1	2	3	15	15	45	75	2
8	2603	History of Arts	2	-	2	10	10	30	50	2
9	2405	Planning and Production Management	2	-	2	10	10	30	50	2
10	2505	Feasibility Studies	2	-	2	10	10	30	50	2
Total Weekly Hours			14	22	36	Total Marks			710	

Table No. (94) Department: Spinning, Weaving and KnittingDepartment No. (12)

Second Year Second Semester

No.	Code No.	Course Title	Number of Weekly Hours			Marks Distribution				Exam Hours
			Lecture	Lesson	Total	Semester Work Marks	Discussion/ Oral	Written	Total	
1	2103	Dobby Fabrics Designs	-	6	6	-	90	-	90	Discussion
2	2106	Weaving Structures	2	2	4	20	20	60	100	2
3	2107	Textiles Analysis	2	2	4	20	20	60	100	2
4	2102	Machine Production Engineering	1	3	4	20	20	60	100	2
5	2115	Quality Control and Examination	2	2	4	20	20	60	100	2
6	2121	Textile Marketing	2	-	2	10	10	30	50	2
7	2403	Computer	1	3	4	20	20	60	100	2
8	2503	Mathematics	2	-	2	10	10	30	50	2
9	2306	Silent Nature	-	4	4	-	1100	-	100	Discussion
10	2607	Languages	2	-	2	10	10	30	50	2
Total Weekly Hours			14	22	36	Total Marks			840	

Table No. (95) Department:Spinning, Weaving and KnittingDepartment No. (12)

Third Year First Semester

No.	Code No.	Course Title	Number of Weekly Hours			Marks Distribution				Exam Hours
			Lecture	Lesson	Total	Semester Work Marks	Discussion/ Oral	Written	Total	
1	3104	Jacquard Fabrics Design	-	8	8	-	120	-	120	Discussion
2	3106	Weaving Structures	2	2	4	20	20	60	100	2
3	3109	Machine Production Engineering	1	3	4	20	20	60	100	2
4	3120	Dyeing and Finishing	2	2	4	20	20	60	100	2
5	3122	Textile Nature	1	3	4	20	20	60	100	2
6	3704	Ecology	2	4	6	30	30	90	150	2
7	3606	Electric engineering	2	-	2	10	10	30	50	2
8	3604	Aesthetics	2	-	2	10	10	30	50	2
Total Weekly Hours			14	22	36	Total Marks			780	

Table No. (96) Department:Spinning, Weaving and KnittingDepartment No. (12)

Third Year Second Semester

No.	Code No.	Course Title	Number of Weekly Hours			Marks Distribution				Exam Hours
			Lecture	Lesson	Total	Semester Work Marks	Discussion/ Oral	Written	Total	
1	3104	Jacquard Fabrics Design	-	8	8	-	120	-	120	Discussion
2	3107	Textiles Analysis	2	2	4	20	20	60	100	2
3	3112	Spinning	2	-	2	10	10	30	50	2
4	3114	Knitting Production Technology	1	3	4	20	20	60	100	2
5	3115	Quality control and Examination	2	2	4	10	10	30	50	2
6	3117	Weaving Design Economies	2	-	2	10	10	30	50	2
7	3403	Computer	1	3	4	20	20	60	100	2
8	3603	Languages	2	-	2	10	10	30	50	2
9	3307	Living Nature	-	4	4	-	100	-	100	Discussion
10	3603	History of Arts	2	-	2	10	10	30	50	2
Total Weekly Hours			14	22	36	Total Marks			770	

Table No. (97) Department:Spinning, Weaving and KnittingDepartment No. (12)

Fourth Year First Semester

No.	Code No.	Course Title	Number of Weekly Hours			Marks Distribution				Exam Hours
			Lecture	Lesson	Total	Semester Work Marks	Discussion/ Oral	Written	Oral	
1	4105	Composite Fabrics	-	10	10	-	250	-	250	Discussion
2	4106	Weaving Structures	2	2	4	20	20	60	100	2
3	4109	Machine Production Engineering	2	2	4	20	20	60	100	2
4	4114	Knitting Production Technology	2	4	6	30	30	90	150	2
5	4704	Ecology	2	4	6	30	30	90	150	2
6	4604	Criticism and Art Appreciation	2	-	2	10	10	30	50	2
7	4605	Aesthetics	2	-	2	10	10	30	50	2
8	4705	Introduction to Psychology	2	-	2	10	10	30	50	2
Total Weekly Hours			14	22	36	Total Marks			900	

Table No. (98) Department:Spinning, Weaving and KnittingDepartment No. (12)

Fourth Year Second Semester

No	Code No	Course Name	Number of Weekly Hours			Marks Distribution				Exam Hours
			Lecture	Lesson	Total	Semester Work Marks	Discussion/ Oral	Written	Oral	
1	4107	Weaving Analysis	2	2	4	20	20	60	100	2
2	4112	Spinning	2	-	2	10	10	30	50	2
3	4122	Textile Nature	2	2	4	20	20	60	100	2
4	4123	Weaving Production Management	2	2	4	20	20	60	100	2
5	4118	Graduation Project	-	10	10	-	250	-	250	Discussion
6	4403	Computer	1	3	4	20	20	60	100	2
7	4602	Languages	2	-	2	10	10	30	50	2
8	10-4307	Living Nature	-	4	4	-	100	-	100	Discussion
9	11-4603	History of Arts	2	-	2	10	10	30	50	2
Total Weekly Hours			13	23	36	Total Marks			900	

(12) Department of Spinning, Weaving and Knitting

12- 1101 Weaving Design Basics

Studying exploitation of point and font in finding decorative effects – exploiting surfaces and stereographs to get decorative formations – symmetry, dropping, exchange and repetitive elements – Color Theories.

12- 1102 Weaving Design Basics

Studying the relation between colors and weaving – designing simple weaving fabrics by using various color effects resulted from long and cross pens – making simple geometric formations and exploiting them in executing various decorative designs.

12- 2103 Dobby Fabrics Design

Innovating simple designs inspired by decorative elements by exploiting weaving structures studied formerly – exploiting geometric forms in making some designs valid for men and women clothes – ties – furniture fabrics – tablecloths and towels – family covers – covers – blankets – within the limits of looms' ability of dobby machines.

12-1304 Jacquard Fabrics Design

Exploiting natural resources, historical ornaments and units inspired by the environment and folk arts in making innovative designs based on simple weaving rules by using the extra weft or wrap – innovating designs valid for furniture fabrics and curtains as well as evening fabrics for women, placemats, towels and others which can be executed by Jacquard devices.

12- 4105 Composite Fabrics Design

Making innovative designs from historical and natural elements from the environment and folk arts for different kinds of fabrics concerned with furniture fabrics and clothes – innovating designs for different kinds of fabrics with terry surfaces executed mechanically.

12- 1106 Weaving Structures (1)

Plain weaving and its derivates – simple twill weaves extended from warp , weft and both sides – twill weaves and their kinds – Atlantic Weaving – spiral fabric – Atlas extension – shaded Atlas – Honeycomb weave – Croup Weave –finding the finds and stomping ligaments – finding the design from the finds and

stomping ligaments.

12- 2106 Weaving Structures (2)

Striped textiles and how to be formed – striped textiles by different finds and weaving – color effect – traditional lattice whether perforated or deviant – weaving lined from warp, real and traditional weft – dual and simple textiles –difference of weaving and order in dual-textiles – methods of cohesion and filling by dual-textiles – triple and multi-layered textiles – color effects on dual-textiles (plain and patterned).

12- 3106 Weaving Structures (3)

Weft textiles which appear from both sides – extra warp textiles whether real or traditional – real and traditional extra weft textiles – complete and half-muslin textiles – real damask – Brocade and AL-Istabraq textiles –terry from weft, patterned and methods of removing it.

12- 4106 Weaving Structures (4)

Terry textiles from warp – terry in the diverged collection way – terry in the baskets way – emergence of terry in one or both surfaces of fabrics – cut and uncut terry textiles –studying terry textiles related to clothes, furniture, curtains, rugs and carpets –real lattice textiles – different kinds of lattice – curved lattice by using normal and special jacquard by the lattice textiles.

12- 1107 Weaving Analysis (1)

Studying basis and rules related to textiles analysis to get the executive specifications of processed fabrics – folded threads – finding a quick statement about the appearance and kind of fabrics – distinguish between directions of warp and weft directions in textiles – shrinking ratio.

12- 2107 Textiles Analysis (3)

Analyzing different models of local old fabrics – extracting executive specifications, weaving structure, finds, stomping ligament and operation mode statement – extracting executive specifications of the most complicated fabrics with reliefs in accordance with weaving structures curriculum of processed fabrics in addition to identifying the applied style of execution.

12- 3107 Textiles Analysis (3)

Analyzing some processed fabrics containing decorative threads with high twist – studying the impact of twisting on textiles appearance – finding the thread's number in both warp and weft by weight – extracting weight of materials necessary to weave longitudinal meter by gram and to get deposition and consumption ratio – analyzing some processed woolen fabrics – extracting their executive specifications –

calculating wastage ratio of processed woolen fabrics – identifying the production range of loom for each kind.

12- 4107 Textiles Analysis (4)

Analyzing some fabrics of large reliefs by different applied methods –cloque fabrics – beck – fabrics of terry surfaces – plush from warp – extracting executive specifications and identifying the applied method of such kinds – identifying exhausts ratio – theoretical and actual production of loom.

12- 1108 Production Engineering (Preparations)

Identifying types of threads in terms of kind and formation – threads preparation consequence as well as phases of formation and operation – the mechanical style to transfer paralysis into reels – calculating the production of spindle and machine – warping and its different kinds – refining (starching) – its importance – its theory – its method of application – the most important factors affecting it – finds and warp drawing-in – the preparatory phase to execute weaving machines by weft.

12- Production Engineering (Machines) (1)

Mechanical looms – improving the style of mechanical looms – the general division of looms and its usages – speeds of mechanical and electronic looms as well as their relation to production – weaving loom and its different parts – weaving theory on looms – devices of looms' operation and stopping – the importance of the process of tightening and fluidity of warp threads by weaving looms – devices of folding or polling the woven – A, self consciousness and its composition means –manual and mechanical dobby devices – devices keeping the fabrics' width – different means to put the weft thread inside the embossing – a machine for cleaning the empty pipes – a machine for wrapping the weft thread around pipes by manual and automatic looms – node making machine.

12- 3109 Production Engineering (Machines) (2)

Jacquard device – purpose of its usage – parts and items of Jacquard as well as its method of installation and cylinders adjustment – practical and theoretical basis to operate the jacquard device – dobby device – its types and method of installation – threads Finishing machines with special specifications of Weaving – methods of machines' maintenance concerned with weaving preparations and processes – training on cardboard punching processes –training on processes of lattices' building by jacquard machines – making geometric plates for all devices.

12- 4109 Production Engineering

Traditional automatic looms – recharging traditional automatic looms by weft – automatic monitoring devices for both warp and weft threads –automatic soft device – devices of weft pipe accelerator – a device for shuttles changing on looms – a device for wrapping weft pipes around the loom – automatic monitoring devices of weft and warp – training on operating different automatic looms – producing different models of fabrics on different kinds of looms.

12- 1110 Weaving Materials

Division of various weaving fibers and means of exposure – the relation between fibers' properties and their structure – morphological structure of different, industrial and natural fibers – mechanical and natural properties of various weaving fibers – thermal properties – optical – electrical – humidity – durability – elongation – smoothness.

12- 1111 Weaving Mathematics

Studying calculations of capillaries, threads and fabrics in the Engineering of spinning, weaving and Finishing – threads numbering rules – mathematical tables concerned with threads numbers and their conversions –zoe and its relation to fabrics properties – mixing materials and calculations related to them – designing or building fabrics and mathematical rules relevant to them – calculating tilt angels in fabrics – specification and operation line of productive processes – costs of production and fabrics pricing.

12- 2112 Spinning (1)

Various processes and phases by which cotton passes before it reaches spinning factories – processes of mixture, division and cleaning – kinds of mixture – cotton lightening machines –cleaning and lightening font –combing process – its purpose and theories – installation of kord machine and its parts.

12- 3112 Spinning (2)

Combing - combing machine and its parts – combing process phases – pulling – its purpose – pulling theory – various methods of pulling and its kinds – twining and its different phases – twining machine and how to be used – some kinds of twining machines.

12- 4112 Spinning (3)

Thread size – fixed tensile – spinning machine installation – its parts –theoretical and practical basis of spinning – factors affecting the amount of pulling – pulling calculation – methods of pulling – twining – shrinking as a result of twines – some defects in spinning phase – the different kinds of threads – Zoe process – fixing twines in the thread – modular production and quality control in spinning – the open-sided spinning machine – mixture ratio and its importance to the final product.

12- 2113 Carpet Production Technology

Studying various applied methods in manufacturing manual and mechanical carpets.

12- 2114 Knitting Production Technology (1)

Identifying tangled textiles and the difference between them and dovetailed textiles and method of producing tangled fabrics – kinds of sutures and needles as well as suture forming mechanism and a study weaving structures of various knitting fabrics.

12- 3114 Knitting Production Technology (2)

General Division of knitting machines which includes rectangle knitting machines, round knitting, wrap knitting and Foley Flinch machines – compound needles machines – parts and items of knitting machines mentioned above – and their different kinds.

12- 4114 Knitting Production Technology (3)

Studying weaving structures that can be taken out of various knitting machines – productivity and methods of adjustment –weaving and mechanical defects and how to be treated – how to calculate the production of various knitting machines and others of studies related to product quality and its usage.

12- 2115 Quality Control and Examination (1)

Examining test of natural properties of bristles –accuracy and diameter of bristles – bristles maturity – mechanical properties of bristles – devices and methods of flexibility measurement – elongation – durability – measuring impurities ratio – measuring humidity – influence of humidity on the mechanical properties of fibers – influence of twines in threads – nature of fibers' surface and cross-section form – warmth feature – plant and animal fibers – methods of their examination and distinguish between them.

12- 3115 Quality Control and examination (2)

Examining test of natural properties of threads – thread number – number of twines – appearance of thread – thread regularity – mechanical properties of thread – submission resistance – flexibility – elongation – natural properties of fabrics – mechanical properties of fabrics – fabrics resistance of tensile and elongation – tear resistance – resistance – blast resistance – solidity strength – shrinking resistance – friction – air permeability – water permeability.

12- 1116 History of Textiles

A historical study of textiles industry establishment and its evolution through different ages – used materials – kinds of threads and their spinning mean – used looms – weaving structures evolution – textiles industry centers and the most important cities – used decorations in producing weaving pieces and their relation to religious, economic, political and artistic sides through different ages.

12- 1117 Weaving Design Economies

Studying rules and design theories of executed fabrics by dobby and jacquard devices concerning ordinary and compound weaving methods and the ordinary division methods of jacquard and nettings – the role of designer in achieving economic results and means to achieve that.

12- 1118 Industrial Regulation

Manufacturing and its impact in economical development – spinning and textiles industry in Egypt and factors of its success – work studying – studying movement and time – method of performing and how to be elicited – training – basis of establishing spinning and weaving projects – regulatory phases in the organization – or industrial project – interactive elements within the project – buildings in spinning and weaving projects as well as the final finishing.

12- 2120 Dyeing and Finishing (1)

Theoretical and practical rules of the preparatory and various processes of cellulosic fibers – terry burning – desizing – boiling – whitening – editing – cotton dyeing by direct dyes – basins dyeing – Indigo Soul – sulfuric dyes – mechanical preparation processes of fabrics.

12- 3120 Dyeing and Finishing (2)

Theoretical and practical rules of cotton dyeing by active dyes chemically – Vipri –protein fibers dyeing theory by acidic dyes – active metal complexes – mixed fibers dyeing theories – chemical preparation of fabrics – immune of water permeability – immune of fire.

12- 2121 Textiles Marketing

Methods of developing the art of textiles marketing management theoretically and practically – experimental fields – methods of marketing – factors affecting marketing processes and their relation to the consumer locally and universally – marketing researches – prices studying – distribution and product quality.

12- 3122 Textiles Nature (1)

Nature of bristles as well as geometric physical structure in addition to its impact on threads and fabrics properties – diameter of the bristle – cross-sector form of a bristle – bristle's axis and its impact on shrinking resistance as well as mechanical and natural properties.

12- 4122 Textiles Nature (2)

Threads nature and its impact on the properties and nature of fabrics of thermal spinning – moisture absorption – tensile strength – blast resistance – descending – lumpiness – functional purpose of the final usage of fabrics.

12- 4122 Weaving Production Management

Regulatory tools in the project – sequence of industrial processes in phases of spinning, weaving and final finishing – meaning of production – production systems – working conditions inside and outside lounges

in accordance with processes nature – designing the location and regulating production lines – studying used weaving materials and their properties as well as the most suitable one for operation concerning the type of production – studying means of transportation and materials phases and circulation.

12- 1109 Fibers chemistry

General rules of forming fibers and theories related to them – chemical structure of natural fibers containing cellulose – wool – natural silk and the genera properties of them – various structural fibers contain Polyamide – Polyester – Poly Acrylic –their preparation methods – chemical structure and their properties.