

UNIVERSITY OF MUMBAI
No. UG/116 of 2015-16

CIRCULAR:-

The Principals of affiliated Colleges in Science and the Heads of the recognized Science Institutions concerned are hereby informed that the recommendation made by the Faculty of Science at its meeting held on 11th August, 2015 has been accepted by the Academic Council at its meeting held on 31st August 2015 **vide** item No. 4.20 and subsequently approved by the Management Council at its meeting held on 31st August 2015 **vide** item No.12 and that in accordance therewith, in exercise of the powers conferred upon the Management Council under Section 54 (1) and 55(1) of the Maharashtra Universities Act, 1994 and the Ordinances 6217 and 6218 and Regulation 8948, 8949 relating to the Course of One Year Diploma in CAD, CAM, and Computer Technologies in the Apparel Industry has been introduced, which is available on the University's web site (www.mu.ac.in) that the same has been brought into force with effect from the academic year 2016-17.

MUMBAI – 400 032
29th October, 2015


REGISTRAR

To,

The Principals of affiliated Colleges in Science.

A.C/4.20/31/08/2015
M.C/12/31/08/2015

No. UG/116 -A of 2015-16

MUMBAI-400 032

29th October, 2015

Copy forwarded with compliments for information to :-

- 1) The Dean, Faculty of Science,
- 2) The Director, Board of Colleges and University Development,
- 3) The Controller of Examinations,
- 4) The Co-Ordinator, University Computerization Centre.


REGISTRAR

...PTO

University of Mumbai

1 Year DIPLOMA in CAD, CAM and Computer Technologies in the Apparel Industry

O.6217 :-Name of the Course: CAD, CAM and Computer Technologies in the Apparel Industry

- 1. Vision:** To develop professionals with expertise in CAD and CAM in the Apparel Industry to cater to the ever increasing need of the fashion and apparel industry.
- 2. Mission:** To equip students with theoretical knowledge and impart practical training as envisaged in the vision. Thus enabling the students to acquire additional applied skills while pursuing the fulltime programme / occupation.
- 3. Objectives of the course:**
 - i. To introduce a career oriented and skill enhancing course on CAD, CAM and Computer Technologies in the Apparel Industry
 - ii. To impart knowledge regarding importance of CAD, CAM and Computer Technologies in the Apparel Industry
 - iii. To enable the students develop entrepreneurial abilities in the field of fashion and apparel.
 - iv. To gain knowledge about use computer in textile apparel designing.
 - v. To observe and understand the designing of textile apparel through computers.
- 4. O.6218:- Eligibility:** XIIth from any field
- 5. Intake capacity:** Minimum 20 candidates per batch. Maximum 60 students (2 batches) (Theory common for all). It will be compulsory for all TYBSc & MSc students of TFT.
- 6. R.8948:- Duration:** 8 months (August to March/April) +4 months internship (or Industry Project)
Once a week practical with instruction session of three hours, once a week practice session (without instructor) and once a week theory session.
- 7. Credits:** 9 credits
- 8. R.8948:- Fees:** Rs 7,000/- (ten thousand per student)
- 9. Honorarium:** 500 Rs per Clock Hour: theory/ Practical
- 10. Centre Incharge:** Rs 10,000/- per Month (Additional Charge)

SEMESTER I

COURSE CODE	TITLE OF THE COURSE	MARKS	WORKLO AD		NO. OF CREDITS	
			L	P	T	P
	CAD CAM and Computer Technologies in Textile & Apparel Sectors (Theory)- I	100	3	-	3	-
	CAD CAM in Textile & Apparel Sectors (Practical) - I	100		3		2
	Computer Technologies in Textile & Apparel Sector (Practical) - I	100		3		2

Course Code	Title of the Course	Lectures / week	Marks allotted	Credits for the Course
	CAD CAM and Computer Technologies in Textile & Apparel Sectors (Theory) - I	3	100	3

Objectives

1. To introduce CAD CAM used in Textile Printing, Weaving & Embroidery
2. To introduce CAD CAM used in Apparel Industry
3. To introduce Computer Technologies used in Retail and other sectors of Apparel Industry

Course Content

Unit	Course Content	Lectures
I	<p>Application of computers in Textile Industry</p> <ul style="list-style-type: none"> • Use of computer from design concept to consumer • CAD in textile design- Weaving & knitting, • Computerized machines in textile industries for fabric structures- design and production. • Application of computerized machines • Terminologies used –CAD, CAM, PDM, ERP, CIM • Recent developments in CAD CAM for Weaving & Knitting Textile Sector • Sourcing of various software's used in these Textile Sectors • Future Trend Forecast of CAD in these Textile Sectors 	15
II	<p>Computers in apparel designing and production</p> <ul style="list-style-type: none"> • Garment designing -2D Forms _ Computer pattern making and grading- basic upper and lower block pattern making with various fashion adaptations _ Spreading and cutting procedures _ Computer technology used in garment assembly _ Programmable sewing machines. <p>Computers integrated manufacturing Information Technology applications and Quick Response</p> <ul style="list-style-type: none"> • Recent developments in CAD CAM for 2 D forms in Apparel Sector • Sourcing of various software's used in these Apparel Sectors • Future Trend Forecast of CAD in the Apparel Industry 	15
III	<p>Computer Technologies _ Sourcing, Manufacturers, Distribution, Retailers, Consumers.</p> <p>Computers and Quality control</p> <ul style="list-style-type: none"> • Recent developments in Computer Technology for Retail Sector • Sourcing of various software's used in Retail Sector • Future Trend Forecast of Computer software's for Retail Sector 	15

Students to make presentations on selected topics which will be marked

Reference:

- Alison Beazley Terry bond, Computer aided pattern design and product development, Black Wele, Amazon, 2003.
- Harold Carr & Barbara Latham, The technology of clothing manufacture, Black Well, Berlin, 2004.
- Hilary Campbell, Designing patterns a Fresh approach to pattern cutting, Stanley Thorues (Publishers) Ltd, United Kingdom, 2003.
- Gerry Cooklin, Pattern grading for men's clothes – The technology of design, best set Typesetter Ltd, Great Britain, 2000.
- Gokarneshan N., Fabric structure & design, New age international publishers, New Delhi, 2005.
- Harold Carr & Barbara Latham, The technology of clothing manufacture, Black Well, Berlin, 2004.
- Kathleen Colussey M., Fashion design on computers, N.J. Prentice Hall Upper Saddle river, 2000.
- Natalie Bray, Dress Pattern Designing- The Basic Principles of cut and fit, Gopsons Paper Ltd, Noida, 2000.
- RichPeace Manual
- Lectra, Gerber, Photoshop, Coraldraw and other software Manuals

Course Code	Title of the Course	Lectures / week	Marks allotted	Credits for the Course
	CAD CAM in Textile & Apparel Sectors (Practical) - I	3	100	3

Objectives

1. To introduce CAD CAM used in Textile Printing, Weaving & Embroidery practically using software's and / visits to industries / organizations.
2. To introduce CAD CAM used in Apparel Industry practically through use of software's and / visits to industries / organizations

Course Content

Unit	Course Content	Lectures
I	Textile Design- Weaving & Knitting <ul style="list-style-type: none"> • Recent developments in CAD CAM for Weaving & Knitting Textile Sector • Sourcing of various software's used in Weaving & Knitting Textile Sector • Future Trend Forecast of CAD in the Weaving & Knitting Textile Sector 	15
II	Apparel Design- Basics. Designing & Pattern Making / Drafting <ul style="list-style-type: none"> • Recent developments in CAD CAM for Pattern Making, Grading, & Marker Planning in the Apparel Sector • Sourcing of various software's used in these Apparel Sectors • Future Trend Forecast of CAD in these Apparel Sectors 	15
III	Apparel Production <ul style="list-style-type: none"> • Grading • Marker Making 	15

Students to make portfolios of all practical work done which will be marked

Visit to computerized quality control units

Visit to Textile Industries

Visit to a fashion and apparel Industry

Internship in design house & apparel

Reference:

Alison Beazley Terry bond, Computer aided pattern design and product development, Black Wele, Amazon, 2003.

Harold Carr & Barbara Latham, The technology of clothing manufacture, Black Well, Berlin, 2004.

Hilary Campbell, Designing patterns a Fresh approach to pattern cutting, Stanley Thorues (Publishers) Ltd, United Kingdom, 2003.

Gerry Cooklin, Pattern grading for men's clothes – The technology of design, best set Typesetter Ltd, Great Britain, 2000.

Gokarneshan N., Fabric structure & design, New age international publishers, New Delhi, 2005.

Harold Carr & Barbara Latham, The technology of clothing manufacture, Black Well, Berlin, 2004.

Kathleen Colussey M., Fashion design on computers, N.J. Prentice Hall Upper Saddle river, 2000.

Natalie Bray, Dress Pattern Designing- The Basic Principles of cut and fit, Gopsons Paper Ltd, Noida, 2000.

RichPeace Manual

Lectra, Gerber, Photoshop, Coraldraw and other software Manuals

Course Code	Title of the Course	Lectures / week	Marks allotted	Credits for the Course
	Computer Technologies in Textile & Apparel Marketing Sectors (Practical) - I	3	100	3

Objectives

1. To introduce Computer Technologies used in Marketing of Textile, Woven & Knitted fabrics and / visits to industries / organizations.
2. To introduce Computer Technologies used in Retail and other sectors of Apparel Industry using software's and / visits to industries/organizations

Course Content

Unit	Course Content	Lectures
I	Software's for Marketing of Textile Woven & Knitted Fabrics <ul style="list-style-type: none"> • Recent developments in CAD CAM for Weaving & Knitting Textile Sector • Sourcing of various software's used in Weaving & Knitting Textile Sector • Future Trend Forecast of CAD in the Weaving & Knitting Textile Sector 	15
II	Software's for Marketing Apparel - Basics. Pattern Making & Drafting Grading Marker Making <ul style="list-style-type: none"> • Recent developments in CAD CAM for Pattern Making, Grading, & Marker Planning in the Apparel Sector • Sourcing of various software's used in these Apparel Sectors • Future Trend Forecast of CAD in these Apparel Sectors 	15
III	Software's & Computer Technologies used in Marketing in the Retail Sector <ul style="list-style-type: none"> • Recent developments in Computer Technology for Retail Sector • Sourcing of various software's used in Retail Sector 	15

	• Future Trend Forecast of Computer software's for Retail Sector	
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Students to make portfolios of all practical work done which will be marked

Visit to computerized quality control units

Visit to Textile Industries

Visit to a fashion and apparel Industry

Internship in design house & apparel

Reference:

Alison Beazley Terry bond, Computer aided pattern design and product development, Black Wele, Amazon, 2003.

Harold Carr & Barbara Latham, The technology of clothing manufacture, Black Well, Berlin, 2004.

Hilary Campbell, Designing patterns a Fresh approach to pattern cutting, Stanley Thorues (Publishers) Ltd, United Kingdom, 2003.

Gerry Cooklin, Pattern grading for men's clothes – The technology of design, best set Typesetter Ltd, Great Britain, 2000.

Gokarneshan N., Fabric structure & design, New age international publishers, New Delhi, 2005.

Harold Carr & Barbara Latham, The technology of clothing manufacture, Black Well, Berlin, 2004.

Kathleen Colussey M., Fashion design on computers, N.J. Prentice Hall Upper Saddle river, 2000.

Natalie Bray, Dress Pattern Designing- The Basic Principles of cut and fit, Gopsons Paper Ltd, Noida, 2000.

RichPeace Manual

Lectra, Gerber, Photoshop, Coraldraw and other software Manuals

SEMESTER II

COURSE CODE	TITLE OF THE COURSE	MARKS	WORKLOAD		NO. OF CREDITS	
			L	P	T	P
	CAD CAM and Computer Technologies in Textile & Apparel Sectors (Theory) - II	100	3	-	3	-
	CAD CAM in Textile & Apparel Sectors (Practical) - II	100		3		2
	Computer Technologies in Textile & Apparel Sector (Practical) - II	100		3		2

Course Code	Title of the Course	Lectures / week	Marks allotted	Credits for the Course
	CAD CAM and Computer Technologies in Textile & Apparel Sectors (Theory) II	3	100	3

Objectives

4. To introduce CAD CAM used in Textile Printing, Weaving & Embroidery
5. To introduce CAD CAM used in Apparel Industry
6. To introduce Computer Technologies used in Retail and other sectors of Apparel Industry

Course Content

Unit	Course Content	Lectures
I	Application of computers in Textile Industry <ul style="list-style-type: none"> • CAD in textile design-printing & dyeing, Embroidery • Computerized machines in textile industries for - design and production. For dyeing and printing • Computer Colour matching systems • Terminologies used • Recent developments in CAD CAM for Dyeing & Printing Textile Sector • Sourcing of various software's used in these Textile Sectors • Future Trend Forecast of CAD in these Textile Sectors 	15
II	Computers in apparel designing and production <ul style="list-style-type: none"> • Garment designing -3D Forms _ Computer technology used in garment assembly _ Programmable sewing machines. Computers integrated manufacturing Information Technology applications and Quick Response <ul style="list-style-type: none"> • Recent developments in CAD CAM for 3D in Apparel Sector • Sourcing of various software's used in these Apparel Sectors • Future Trend Forecast of CAD in these Apparel Sectors 	15
III	Computer Technologies <ul style="list-style-type: none"> • E- Commerce for textile sectors <ul style="list-style-type: none"> • Recent developments in Computer Technology for E Commerce in Retail Sector • Sourcing of various software's used for E Commerce in Retail Sector • Future Trend Forecast of Computer software's for E Commerce in the Retail Sector 	15

Students to make presentations on selected topics which will be marked

Reference:

- Alison Beazley Terry bond, Computer aided pattern design and product development, Black Wele, Amazon, 2003.
- Harold Carr & Barbara Latham, The technology of clothing manufacture, Black Well, Berlin, 2004.

Hilary Campbell, Designing patterns a Fresh approach to pattern cutting, Stanley Thorues (Publishers) Ltd, United Kingdom, 2003.

Gerry Cooklin, Pattern grading for men's clothes – The technology of design, best set Typesetter Ltd, Great Britain, 2000.

Gokarneshan N., Fabric structure & design, New age international publishers, New Delhi, 2005.

Harold Carr & Barbara Latham, The technology of clothing manufacture, Black Well, Berlin, 2004.

Kathleen Colussey M., Fashion design on computers, N.J. Prentice Hall Upper Saddle river, 2000.

Natalie Bray, Dress Pattern Designing- The Basic Principles of cut and fit, Gopsons Paper Ltd, Noida, 2000.

RichPeace Manual

Lectra, Gerber, Photoshop, Coraldraw and other software Manuals

Course Code	Title of the Course	Lectures / week	Marks allotted	Credits for the Course
	CAD CAM and Computer Technologies in Textile & Apparel Sectors (Practical) - II	3	100	3

Objectives

3. To introduce CAD CAM used in Textile Printing, Weaving & Embroidery practically using software's and / visits to industries / organizations.
4. To introduce CAD CAM used in Apparel Industry practically through use of software's and / visits to industries / organizations
5. To introduce Computer Technologies used in Retail and other sectors of Apparel Industry using software's and / visits to industries/organizations

Course Content

Unit	Course Content	Lectures
I	Textile Printing Textile Embroidery <ul style="list-style-type: none"> • Recent developments in CAD CAM for Textile Sector • Sourcing of various software's used in Textile Industries • Future Trend Forecast of CAD in the Textile Industry 	15
II	Apparel Design- Advanced <ul style="list-style-type: none"> • Recent developments in CAD CAM for Apparel Sector • Sourcing of various software's used in Apparel Industries • Future Trend Forecast of CAD in the Apparel Industry 	15
III	Software's & Computer Technologies used in Retail Sector E- Commerce for textile sectors- Details including website <ul style="list-style-type: none"> • Recent developments in Computer Technology for Retail Sector • Sourcing of various software's used in Retail Sector • Future Trend Forecast of Computer software's for Retail Sector 	15

Students to make portfolios of all practical work done which will be marked

Visit to computerized quality control units
Visit to Textile Industries
Visit to a fashion and apparel Industry
Internship in design house & apparel

Reference:

Alison Beazley Terry bond, Computer aided pattern design and product development, Black Wele, Amazon, 2003.
Harold Carr & Barbara Latham, The technology of clothing manufacture, Black Well, Berlin, 2004.
Hilary Campbell, Designing patterns a Fresh approach to pattern cutting, Stanley Thorues (Publishers)

Ltd, United Kingdom, 2003.

Gerry Cooklin, Pattern grading for men's clothes – The technology of design, best set Typesetter Ltd, Great Britain, 2000.

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Kathleen Colussey M., Fashion design on computers, N.J. Prentice Hall Upper Saddle river, 2000.

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Lectra, Gerber, Photoshop, Coraldraw and other software Manuals

Course Code	Title of the Course	Lectures / week	Marks allotted	Credits for the Course
	Computer Technologies in Textile & Apparel Marketing Sectors (Practical) - II	3	100	3

Objectives

1. To introduce Computer Technologies used in Marketing of Textile, Woven & Knitted fabrics and / visits to industries / organizations.
2. To introduce Computer Technologies used in Retail and other sectors of Apparel Industry using software's and / visits to industries/organizations

Course Content

Unit	Course Content	Lectures
I	Software's for Marketing of Textile Printed, Dyed & Embroidered Fabrics <ul style="list-style-type: none">• Recent developments in CAD CAM for Dyed, Printed & Embroidered Textile Sector• Sourcing of various software's used in Weaving & Knitting Textile Sector• Future Trend Forecast of CAD in the Weaving & Knitting Textile Sector	15
II	Software's for Marketing of Advanced Apparel <ul style="list-style-type: none">• Recent developments in CAD CAM for Pattern Making, Grading, & Marker Planning in the Apparel Sector• Sourcing of various software's used in these Apparel Sectors• Future Trend Forecast of CAD in these Apparel Sectors	15
III	Software's & Computer Technologies used in E- Retail Sector <ul style="list-style-type: none">• Recent developments in Computer Technology for E- Retail Sector• Sourcing of various software's used in E- Retail Sector• Future Trend Forecast of Computer software's for E- Retail Sector	15

Students to make portfolios of all practical work done which will be marked

Visit to computerized quality control units
Visit to Textile Industries
Visit to a fashion and apparel Industry
Internship in design house & apparel

Reference:

Alison Beazley Terry bond, Computer aided pattern design and product development, Black Wele, Amazon, 2003.
Harold Carr & Barbara Latham, The technology of clothing manufacture, Black Well, Berlin, 2004.
Hilary Campbell, Designing patterns a Fresh approach to pattern cutting, Stanley Thorues (Publishers) Ltd, United Kingdom, 2003.
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Gokarneshan N., Fabric structure & design, New age international publishers, New Delhi, 2005.
Harold Carr & Barbara Latham, The technology of clothing manufacture, Black Well, Berlin, 2004.
Kathleen Colussey M., Fashion design on computers, N.J. Prentice Hall Upper Saddle river, 2000.
Natalie Bray, Dress Pattern Designing- The Basic Principles of cut and fit, Gopsons Paper Ltd, Noida, 2000.
RichPeace Manual
Lectra, Gerber, Photoshop, Coraldraw and other software Manuals