

Book 3810

By Secretary
M.P. Board of Technical Education
BHOPAL

M. P. Board of Technical Education

B H O P A L



CURRICULUM OF DIPLOMA IN ARCHITECTURE Third To Sixth Semester

Developed by-

S. V. Government polytechnic, Bhopal

In collaboration with-

State curriculum development centre,
M. P. Board of technical education, **Bhopal**

Sponsored by-

Directorate of technical education.

Madhya Pradesh, Bhopal.

Dy Secretary
M.P. Board of Technical Education
BHOPAL

38/01

M.P. BOARD OF TECHNICAL EDUCATION,
BHOPAL.

C U R R I C U L U M

O F

D I P L O M A I N

A R C H I T E C T U R E

THIRD TO FIFTH SEMESTER

DEVELOPED BY :

S.V. GOVERNMENT POLYTECHNIC, BHOPAL.

IN COLLABORATION WITH :

STATE CURRICULUM DEVELOPMENT CENTRE,
M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

SPONSORED BY :

DIRECTORATE OF TECHNICAL EDUCATION, MADHYA PRADESH

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.
CURRICULUM OF

DIPLOMA IN ARCHITECTURE IIIrd TO Vth SEMESTER.

I N D E X

38/02

| S.No. | Subject/Description. | Page No. |
|-------|--|----------|
| 1. | Preface | 1 |
| 2. | List of participants. | 2 |
| 3. | Introduction | 3 |
| 4. | Programme Structure, studies and | 4 |
| 5. | Scheme of Examination IIIrd Semester. | 5 |
| 6. | History of Architecture. | 6-9 |
| 7. | Site Surveying. | 10-13 |
| 8. | Building Construction -II. | 14-18 |
| 9. | Design.-II. | 19-24 |
| 10. | Scheme of Examination IVth Semester. studies and | 25 |
| 11. | Specification and Building materials. | 26-29 |
| 12. | Structure. | 30-33 |
| 13. | Computer Aided Drafting. | 34-38 |
| 14. | Design-III. | 39-41 |
| 15. | Scheme of Examination Vth Semester. studies and | 42 |
| 16. | Estimating and Costing. | 43-46 |
| 17. | Building Construction-III. | 47-50 |
| 18. | Production Drawing | 51-54 |
| 19. | Design-IV. studies and | 55-57 |
| 20. | Scheme of Examination Vth Semester. | 58 |
| 21. | Building Services. | 59-62 |
| 22. | Town Planning and Environmental Engineering. | 63-66 |
| 23. | Entrepreneurship and Management. | 67-70 |
| 24. | Design Project | 71-74 |
| 25. | Training. | 75. |

P R E F A C E

38/03

The curriculum for Diploma in Architecture is being revised under World Bank Project. The Curriculum for first two semesters was revised in Jan. 1995 and the curriculum for remaining four semesters is revised now.

As per N.P.I.U. norms an industrial survey was taken up before starting the revision work. Based on this the activities to be performed by the technician in field of Architecture were enlisted and skills and knowledge required were worked out. The workshop group for first two semesters detailed out the curriculum for these semesters and listed out only tentative subjects which would be taught in next semesters.

Workshop group for revision for IIIrd to VIth Semester diploma in Architecture included persons from field practice, teachers from higher institutions and polytechnics. The workshop was held during 25th to 29th Sept. 1995 and on the basis of previous survey data, work of group for revision of first two semesters remaining curriculum for IIIrd to VIth semesters was detailed out.

We are very much thankful to the authorities, experts and participants who contributed directly or indirectly in development of this curriculum.


(G.K. PAKHIJANI)

Principal,
S.V. Government Polytechnic, Bhoj

WORKSHOP GROUP

- 38/04
- Convener : Shri G.K. Makhijani,
Principal,
S.V. Government Polytechnic, Bhopal.
- Co-ordinator : Smt. Sandhya Ekbote,
I/C. H.O.D.
Deptt. of Town Planning and Architecture,
S.V. Government Polytechnic, Bhopal.

PARTICIPANTS

- (1) Prof. S.V. Sahastrabudhye, Prof. in Architecture, M.A.C.T. Bhopal
- (2) Shri M.E. Varade, Principal, Govt. Women's Polytechnic, Hoshangabad
- (3) Shri K.K. Chakravarti, Architect, Private Practicing.
- (4) Shri Mukesh Kumar Lalji, Architect, Private Practicing
- (5) Ku. Sadhana Jain, Architect, Private Practicing.
- (6) Ku. Iti Upadhyay, Architect, Private Practicing.
- (7) Shri Anil Bakhari, I/ HOD. S.V. Govt. Poly. Bhopal.
- (8) Smt. Juhi Jain, Lecturer, S.V. Govt. Poly. Bhopal.

REPROGRAPHY GROUP MEMBERS.

- (1) Shri Dheerendra Tiwari.
- (2) Shri Rajanish.
- (3) Shri Sharad Joshi.

INTRODUCTION

38/05

The Diploma in Architecture is a course for women to train them as middle level technician in field of Architecture. The building activities are expanding very fast day by day requiring additional manpower. A properly trained technician gets easily absorbed in private industry or Government organisation.

The building industry is changing fast as load on urban land is increasing, changing planning concepts, introduction of alternate building materials and use of computers demand for the revision of existing curriculum. With this view point the curriculum for Diploma in Architecture is revised to give skill and knowledge for the present and future industrial need.

The revision work is taken up on scientific line following the NPIU norms. The details of process followed is enclosed with revised curriculum for 1st and 2nd semester only and this document contains details of 3rd to 6th semester curriculums.

M.F. BOARD OF TECHNICAL EDUCATION, BHOPAL.

DIPLOMA IN ARCHITECTURE

PROGRAMME STRUCTURE

| Course Code. | First Semester. | Course Code. | Second Semester. | Course Code. | Third Semester. | Course Code. | Fourth Semester. | Course Code. | Fifth Semester. | Course Code. | Sixth Semester. |
|--------------|-------------------------|--------------|---|--------------|---------------------------|--------------|-------------------------------------|--------------|----------------------------|--------------|--|
| 1.1 | Graphics-I | 2.1 | Graphics-II | 3.1 | History of Architecture. | 4.1 | Specification and Building material | 5.1 | Estimating and Costing | 6.1 | Building Services. |
| 1.2 | Building Construction-I | 2.2 | Architectural Appreciation | 3.2 | Site Surveying | 4.2 | Structure | 5.2 | Building construction III. | 6.2 | Town Planning & Environmental Engineering. |
| 1.3 | Communication Skill | 2.3 | Basic Design and Elementary Architectural Design, | 3.3 | Building Construction-III | 4.3 | Computer aided Drafting | 5.3 | Production Drawing. | 6.3 | Entrepreneurship & Management. |
| 1.4 | Workshop | - | - | 3.4 | Design-II. | 4.4 | Design-III | 5.4 | Design-IV | 6.4 | Design Project |
| | | | | | | | | | | 6.5 | Organisation Training. |

RULE FOR DIVISION

1. To pass the examination the candidate has to secure minimum of 33% marks in theory/ drawing paper
40% marks in practical/viva examination
60% marks in each sessional work/class works/term work/
Lab, work.

2. Division will be awarded as follows :
- 1st Division Hns. 75% marks in aggregate or more will be placed First Division Honours.
 - 66% in aggregate or more but less than 75% will be placed in First Division.
 - 45% marks or more in aggregate but less than 66% will be placed in Second Division.
 - Less than 45% in aggregate but secure the minimum pass marks in each theory and practical subjects will be placed in Pass Division.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL
 THIRD SEMESTER DIPLOMA PROGRAMME IN ARCHITECTURE TO BE INTRODUCED IN 196-97
 AT GOVERNMENT WOMEN'S POLYTECHNICS IN M.P.

38/85
 38/07

| S. No. | Name of Course | Scheme of Study | | Sessional Term work | Progressive Assessment | | Board Examination | | Pract. Duration | Marks | Remarks | |
|--------|-------------------------------|-----------------------|---------|---------------------|------------------------|-----|-------------------|-----------------|-----------------|---------|---------|---|
| | | contact Hrs. per week | Tuts. | | I | II | Theory paper | Pract. Duration | | | | |
| 1. | 3.1 History of Architecture | 7(112) | - | 7(112) | 30 | - | 10 | 10 | 1 | 3 Hrs. | 050 | - |
| 2. | 3.2 Site Surveying | 02(32) | 02(32) | 02(32) | 30 | 30 | 10 | 10 | 1 | 3 Hrs. | 050 | 1 |
| 3. | 3.3 Building Construction II. | 03(48) | 05(80) | 8(128) | 30 | 30 | 10 | 10 | 1 | 3 Hrs. | 100 | 1 |
| 4. | 3.4 Design-II. | 03(48) | 11(176) | 14(224) | 50 | 50 | 10 | 10 | 1 | 06 Hrs. | 200 | 1 |
| | | 15(240) | 21(336) | 36(576) | 30 | 120 | 40 | 40 | 4 | - | 400 | 3 |

NOTE: (1) No. of Theory papers 04
 (2) Total Theory marks 400
 (3) No. of practicals. 03
 (4) Total Pract. Marks. 150
 (5) Implant Trg. Marks. -
 (6) Total marks of Sessional Prog. Asst. Pract. and Implant Training. 380

(7) Ratio of theory marks and (Sessional + Prog. Asst. + Practical + Implant Trg. Marks. 400 : 380

(8) Total Marks. - 780

(9) Passing marks for (a) Theory - 33%
 (b) Pract. - 40%
 (c) Sessional-60%
 (d) Implant Training. -50%

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE

38/08

COURSE : HISTORY OF ARCHITECTURE

COURSE CODE : 3.1

R A T I O N A L E

Past experiences always cautions, provides guidelines, lays opportunities to do the things for present and future. Thus for the area of Architecture also study of history becomes essential. The course provides inputs on the planning, construction and adornment of various historical examples selected on the basis of style.

The course aims at developing analytical trend of thinking together with presentation and communication abilities. This learning experience also develops thinking and imagination of three dimensional structures in totality and in sections which is absolutely essential for gaining design capabilities.

O B J E C T I V E S :

- The student will be able to :
- (1) Develop imaginative thinking based on forms, structure, construction and out look.
 - (2) Develop understanding and communication through the study of historical examples.
 - (3) Develop understanding about proportions and scales.
 - (4) Develop confidence for analysis of the buildings.
 - (5) Acquire skill of presentation and expression.
 - (6) Develop positive attitude for self learning.

M.P. BOARD OF TECHNICAL EDUCATION, BHILAI.

PROGRAMME : DIPLOMA IN ARCHITECTURE.
COURSE : HISTORY OF ARCHITECTURE.
COURSE CODE : 3.1

38/09

C O N T E N T S .

| <u>S.No.</u> | <u>Topics.</u> | <u>Details.</u> |
|--------------|--|---|
| 1.00 | Study of Indian Architectural examples on the basis of planning, structure, characteristics, limitations of materials, ornamentations. | <ul style="list-style-type: none"> - Vedic forms. - Buddhist : Chatya Hall Bhoja - Jain : Mount Abu - Indaryan: Ling Raj Temple, Bhuvaneshwar. - Dravidian : Shore temple, Rath, Kailash temple. - Indo Islamic : Golgumbaj Bijapur. Buland Darwaja, Kutub Minar Tajmahal |
| 2.00 | Comparisons of Indo-Aryan and Dravidian temples. | - Comparison on the basis of different elements of temples like Shikhara, nomenclature. |
| 3.00 | Study of European Architecture on the basis of planning, structure characteristics, limitations of materials, ornamentations. | <ul style="list-style-type: none"> - Greece : Parthenon Athens. - Rome : Pantheon Rome. - Byzantine : Saint, Sophiya Constantinople - Gothic : NotreDam, Paris Westminster Abbey. - Romanesque : Pisa Cathedral |
| 4.00 | Comparison of Roman and Greek orders. | - Comparisons of Doric, Ionic, Tuscan, Corinthian orders on the basis of shape size and proportions. |
| 5.00 | Dehistoric the movements of modern, post modern Architecture with the help of theories/philosophy of given Architects. | : Architects : Ignier Sullivan, Mies Van De Rohe Frank Lloyd Wright Le Corbusier, Mou's Khan. |
| 6.00 | Study of Contemporary Architecture with the help of theories/philosophy of given Architects. | : B.V. Doshi, Charles Corie; Lenny baker Anant Raje, Kanvinle. |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE :

COURSE : HISTORY OF ARCHIT. 7E. 38/10

COURSE CODE : 3.1

LIST OF SESSIONALS

- Sketches of Historical Buildings alongwith its characteristics.
- Seminar on the Architects works of modern post modern and contemporary Architecture.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : HISTORY OF ARCHITECTURE.

COURSE CODE : 3.1

SCHEME OF STUDIES

| <u>S.No.</u> | <u>Topic.</u> | <u>Theory classes.</u> | <u>Total</u> |
|--------------|--|------------------------|--------------|
| 1. | Study of Indian Architecture | 30 | 30 |
| 2. | Comparision of Indo Aryan & Dravidian temples. | 04 | 04 |
| 3. | Study of European Architecture. | 30 | 30 |
| 4. | Comparision of Roman and Greek orders. | 04 | 04 |
| 5. | Movement of Modern and Post Modern Architecture. | 30 | 30 |
| 6. | Contemporary Architecture. | 30 | 30 |
| | Total | 128 | 128 |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.
COURSE : HISTORY OF ARCHITECTURE.
COURSE CODE : 3.1

38/11

LIST OF BOOKS

| <u>S.No.</u> | <u>Title</u> | <u>Author</u> | <u>Publisher.</u> |
|--------------|--|------------------------|---|
| 1. | A History of Architecture. | Sir Barister Fletcher. | Charis Scribner's Sons, Newyork. |
| 2, | Balkrishna Doshi An Architect for India. | Curtis William J.R. | Hizzoli International, Inc. Newyork. |
| 3. | Frank Lloyd Wright American Architect for the twentieth Century. | Sommer Robin Longley | Hison Books Ltd; London |
| 4. | A minar Book in the series of Architects in the third world. | Khan, Hashuddin | Concept Media Pvt. Ltd; Singapur. |
| 5. | Indian Architecture. | Brown Percy | D.B. Tarapolevala Sons and Co. private Ltd, Bombay. |
| 6. | A History of Architecture. | Musproce | - |
| 7. | Architecture in India. | Moniteur | - |
| 8. | World Architecture. | Hiraakar | - |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.
COURSE : SITE SURVEYING.
COURSE CODE : 3.2

38/12

R A T I O N A L E

All building proposals are designed considering the site and situation, the shapes and size, area content, outline, slope, aspect, topography. All matter in ^{evolving} a building shape. Therefore unless student get knowledge to survey the site they will not be able to design the building projects. The design may be done by anybody but base information should be ready. Therefore the course aims at providing all theoretical and practical education in site survey. The emphasis is laid on acquainting oneself to instruments their uses, survey methods, field work, office work etc.

O B J E C T I V E . The student will be able to

- (1) Handle the survey equipments ^{independently} in group.
- (2) Obtain technological know how about site surveying.
- (3) Develop surveying abilities.
- (4) Obtain confidence in handling bigger sites and modern instruments.
- (5) Acquire skill in operating survey instrument.
- (6) Develop group work attitudes.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : SITE SURVEYING

COURSE CODE : 3.2

38/13

C O N T E N T S

| S.No. | Contents | Details. |
|-------|--------------------|--|
| (1) | Chain surveying | Ranging, taking and recording offsets, triangulation survey, concept of chains traverse |
| (2) | Compass | Surveyors compass, Prismatic compass. Whole circle bearing, Reduced bearing, Local attraction and its elimination, traversing, plotting, closing error and its adjustment. |
| (3) | Plain table survey | Theory, application and different methods, with merits and demerits. |
| (4) | Levelling | Theory of levelling method of levelling i.e. \angle Height of Instrument Method, Rise and fall method, fly levelling, contouring by grid, plotting of contours. |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL

PROGRAMME : DIPLOMA IN ARCHITECTURE

COURSE : SITE SURVEYING.

COURSE CODE : 3.2

38/14

LIST OF PRACTICALS/STUDIO WORK.

- (1) Four practicals of the following :
 - (a) Chain surveying.
 - (b) Compass
 - (c) Plain table survey.
 - (d) Levelling.
 - (e) Layout of building.

- (2) Studio work shall include the following sheets :
 - (a) Sheets of different symbols.
 - (b) Plotting of the practical of the chain survey and compass
 - (c) Sheet on plotting of contours.

Drawing shall be on full imperial size,
Sheet of scale 1 : 500 showing position of
wells trees fencing and using different symbols.

M.P.E BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : SITE SURVEYING

38/15

COURSE CODE : 3.2

SCHE OF STUDIES

| S.No. | Topic. | Theory Hrs. | ST. Hrs. | Pract. Hrs. | Total |
|-------|--------------------|-------------|----------|-------------|-------|
| (1) | Chain Surveying | 08 | 12 | 12 | 32 |
| (2) | Compass | 08 | 12 | 12 | 32 |
| (3) | Plain table survey | 08 | 04 | 12 | 24 |
| (4) | Levelling | 08 | 04 | 12 | 24 |
| TOTAL | | 32 | 32 | 48 | 112 |

M.P.E. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : SITE SURVEYING.

COURSE CODE : 3.2

LIST OF BOOKS

| S.No. | Title | Author | Publisher | Approx. Cost |
|-------|---------------------------|-------------|-----------|--------------|
| 1. | Surveying and levelling | Rangwala | - | 100/- |
| 2. | Surveying Vol. I, II, III | Funamia | | |
| 3. | Surveying Vol. I, II, III | Kanatkar | | |
| 4. | Surveying Vol. I, II | C.L. Cochar | | |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.
COURSE : BUILDING CONSTRUCTION- II.
COURSE CODE : 3.3

R A T I O N A L E

38/16

Every building is built with materials like brick, stone, timber etc. Using these materials has certain practice and technique which need to be studied scientifically and methodically. The course comprises all such inputs for various components of building construction. It provides for technical knowledge of preparation of material so as to lay it at its appropriate place. The detailing, fixtures, fastening, sequence, curing, finishing are all necessary to be studied for appropriate use and structural stability. Emphasis^{is} also laid on how the drawing of construction details are prepared and appropriate ^{scales} are used.

OBJECTIVES : The student will be able to :

- (1) Obtain knowledge about material for building construction.
- (2) Develop ability to design sections for various components of buildings.
- (3) Develop analytical and selective ability.
- (4) Gain motivation for refinement in the practice of building construction.
- (5) Acquire skill in preparing working details.

M.F. BOARD OF TECHNICAL EDUCATION, BHCTAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.
COURSE : BUILDING CONSTRUCTION-II.
COURSE CODE : 3.3

C O N T E N T S

38/17

| S.No. | Topic. | Details. |
|-------|-------------------|---|
| 1. | Doors and windows | <ul style="list-style-type: none">- Pressed sheet steel frame (Dewas section) double rebated single rebated.- Pressed sheet panels (door shutters)- I.V.C. door frame.- Z section, T. Section, F. Section etc.- Casement, windows.- Fixing of glazing.- Louvered window.-Collect information through catalogues. |
| 2. | Roof | <ul style="list-style-type: none">- Single rafter, lean to roof, king post, roof with tiles.- Designing and detailing of above roofing system.- Fixing of roof tiles, A.C. sheet, Fibre reinforced plastic sheet as roofing material. |
| 3. | Timber staircase | <ul style="list-style-type: none">- Single flight timber staircase suitable for reaching mezzanine floor.- Calculate Rise and tread.- Identify different parts. |

Contd.....

S.No.

Topic.

Details.

38 / 18

4. Timber floor
- Timber floor for magazine for a existing structure.
 - Design single joist, floor for above situation
 - Identify and specify various parts
 - Show joinary details for above.
 - Make drawings, plan, sectional elevation, for above timber floor.
5. Arches
- Make sketches of semi circular and segmental arch,
 - Identify various components and terms.
6. Foundation
- Identify type of foundation for different soil condition.
 - Load bearing foundation for single storey building and compound wall.
 - R.C.C. footing foundation for R.C.C. framed structure.
 - Pile foundation showing pile cap and grid beam.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.
COURSE : BUILDING CONSTRUCTION- II. 38/19
COURSE CODE : 3.3

LIST OF PRACTICALS / STUDIO WORKS.

- Design and drawing of door steel frame with required details.
- Design and drawing of window with steel frame and glazing with required detail.
- Draw king post truss for a given span and given roofing material draw different details of joinery and at eaves and ridge.
- Make sketches of single rafter roof and lean to roof showing different components.
- Timber staircase : Design and drawing of single flight staircase for a given height.
- Design single joist timber floor for mezzanine.
- Arches makes, Sketches of semi circular and segmental arch.
- Foundation : Draw sketches of load bearing foundation, R.C.C. foundation and pile foundation.
- Use of water level.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE,
COURSE : BUILDING CONSTRUCTION-II.
COURSE CODE : 3.3

38/20

SCHEME OF STUDIES

| S.No. | Topic. | Th. Hrs. | Studio Hrs. | Total. |
|-------|-------------------|----------|-------------|--------|
| 1. | Doors and windows | 12 | 20 | 32 |
| 2. | Roofs | 8 | 15 | 23 |
| 3. | Timber staircase | 8 | 10 | 18 |
| 4. | Timber floor | 4 | 8 | 12 |
| 5. | Arches | 4 | 8 | 12 |
| 6. | Foundation | 12 | 19 | 31 |
| Total | | 48 | 80 | 128 |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE,
COURSE : BUILDING CONSTRUCTION- II.
COURSE CODE : 3.3

LIST OF BOOKS.

| S.No. | Title | Author | Publisher | Cost. |
|-------|---|-----------------|-----------|------------|
| 1. | Architects Handbook of Construction detailing | Ballast D.E. | - | 80.50 |
| 2. | Building construction Vol. I, II, III and IV | W.B. Mackay | Longman | 275/- each |
| 3. | Building Construction | Sushil Kumar | Standard | 55/- |
| 4. | Building Construction | B.G. Punmia | Taxmi | 55/- |
| 5. | Building Construction | Rangwala | - | 60/- |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.
COURSE : DESIGN II
COURSE CODE : 3.4

38/21

R A T I O N A L E

Any Architectural Design immerses from the application of basic design presented through appropriate techniques. Employing different elements for their functional and aesthetic effects needs study of visual effects, and detail study of transition spaces. The course aims at providing this prerequisite as a input to develop design capabilities. The attempt is also made to enable them to learn photography techniques and use it for architectural design presentation. It is also aimed at inducing confidence in students through seminars.

OBJECTIVES : The students will be able to

- (1) Appreciate the need and importance of architectural design and presentation techniques.
- (2) Develop creativity through self doing.
- (3) Gain innovative abilities.
- (4) Attain skills in presentation.
- (5) Develop attitude to know further.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : DESIGN II

COURSE CODE : 3.4

C O N T E N T S

38/22

| S.No. | Topic. | Details. |
|-------|--|--|
| 1. | Theory of design. | - Redefining the words ; space, form, proportion, balance, rythm, axis etc. |
| 2. | Application of Basic design to Architectural design. | - Conversion of form, colour, texture, theories of basic design to architectural design in the design of small unit like kiosk/bus shelter/telephone booth/information centre/information and reception booths/ police assistance booth/ Day shelter. - Prepare plan, elevation, section for above design using different presentation techniques. - Prepare model out of ivory sheet/ other material. |
| 3. | Study of transition spaces in a building. | - Study of transition spaces like verandah, porch, entrance, corridor stairs and lifts through books and magazine. These shall be on following aspects. : Location, type of space, structure, asthetic value |
| 4. | Design of primary school/ Nursery School. | - Design of primary school using above elements and other requirements like light and ventilation. - Identify and show relation of built and unbuilt spaces. - Analysis of desired movement. - Planning of outdoor spaces, noise control etc. - Prepare basic drawings to explain the scheme with emphasis on presentation. - Prepare model in mount board/other material, Block model. |

Contd....

| S.No. | Topic. | Details. |
|-------|-------------|--|
| 5. | Photography | <ul style="list-style-type: none">- Know how to work with camera- Techniques of photography for buildings, models and interiors.- Work in dark room to develop print and enlarge photographs. |
| 6. | Site visit | <ul style="list-style-type: none">- Site visit to under construction building.- Site visit to existing and occupied buildings.- Prepare report on these visits highlighting merits and demerits.- Presentation report in seminar. |

38/23

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.
COURSE : DESIGN II
COURSE CODE : 3.4

38/24

LIST OF PRACTICALS/STUDIO WORK.

1. 2D/3D representation of atleast one visual effect.
2. Architectural design for a small unit with emphasis on basic design.
3. Model for design.
4. Design for primary school building/ nursery school.
5. Exposing and developing and printing one roll of 36 snaps.
6. Present seminar on paper, on site visit.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

38/25

COURSE : DESIGN-II

COURSE CODE : 3.4

SCHEME OF STUDIES.

| S.No. | Topic. | Theory Classes. | ST.Classes. | Total |
|-------|--|--------------------|-------------|-------|
| 1. | Theory of design | 10 | 20 | 30 |
| 2. | Application of basic design to Architectural design. | 06 | 30 | 36 |
| 3. | Study of transition spaces in building. | 05 | 30 | 35 |
| 4. | Design of primary school. | 05 | 46 | 51 |
| 5. | Photography | 18 | 20 | 38 |
| 6. | Site visit. | 04 | 30 | 34 |
| Total | | 48 | 176 | 224 |

M.F. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : DESIGN-II.

COURSE CODE : 3.4

38/26

LIST OF BOOKS.

| S.No. | Title. | Author | Publisher | Approx.Cost. |
|-------|---|---|---|--------------|
| 1. | The Thames and Hudson Manual of Rendering with pen and ink. | Gill Robert | Thames and Hudson Ltd. London | 400.00 |
| 2. | Time saver standards for building types. | Joseph De Chiara and John Hancock Callender | Megraw Hill publishing Co. Singapur | 2000.00 |
| 3. | Ernst Neufert Architect's Data. | Jones Vincent | Blackiyell Scientific Publication Oxford. | |
| 4. | Architectural Graphic standards. | Ramsay/Sleeper | - | 2000.00 |
| 5. | Modern Basic Drafting. | Wearver. | - | - |

JOURNAIS :

1. Architecture & Design. Mediatransia (F) 219, Tulsia Chambers 212 Nariman Point, Bombay- 400021
2. Inside Outside The Manager C-N 23/90 Cannaight place New Delhi -110001

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.
 IVTH SEMESTER DIPLOMA PROGRAMME IN ARCHITECTURE TO BE INTRODUCED IN 96-97
 AT GOVERNMENT WOMEN'S POLYTECHNIC IN P.F.

38/27

| S.No. | Code. | Name of Course. | Schedo of Study contact Hrs. per week. | Sessional Term Lab Theory Lab. | Total. work work. I Tuto. | Progressive Assessment II. | Theory Duration Marks paper | Practical Marks | Remarks. |
|-------|-------|--|--|--------------------------------------|---------------------------------|----------------------------------|--------------------------------|--------------------|----------|
| 1. | 4.1 | Specification and Building Materials. | 6(96) | - | 6(96) | 10 | 1 | 100 | - |
| 2. | 4.2 | Structure | 10(160) | - | 10(160) | 10 | 1 | 100 | - |
| 3. | 4.3 | Computer Aided Drafting | 2(30) | 5(80) | 7(112) | 10 | 1 | 100 | 1 - 50 |
| 4. | 4.4 | Design-III | 3(48) | 10(160) | 13(208) | 10 | 1 | 200 | 1 - 50 |
| | | | 21(336) | 15(240) | 36(576) | 40 | 4 | 500 | 2 - 100 |

NOTE: (1) No. of theory papers 04
 (2) Total Theory marks 500
 (3) No. of practicals. 02
 (4) Total practical marks. 100
 (5) Implant Trg. marks -
 (6) Total marks of sessionals 310
 Prog. Assnt, Practical
 and Implant Training.

(7) Ratio of theory marks
 and (sessionals + Prog. Assnt.
 + Practical + Implant Trg.
 (marks)
 (8) Total marks. 810
 (9) Passing marks for. (a) Theory - 33%
 (b) Practical - 40%
 (c) Sessionals - 60%
 (d) Implant Trg. 50%

38/27

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE
COURSE : SPECIFICATION AND BUILDING MATERIALS
COURSE CODE : 4.1

38/28

R A T I O N A L E

Any architectural design is basically a material expression. All components require different materials and all materials have different specifications. Therefore this course is included at this semester to provide necessary knowledge and skill in using appropriate material for appropriate purpose. The students are expected to become versed with qualities, technical specifications, brief specifications and detailed specifications.

OBJECTIVES : The students will be able to

- (1) Appreciate the importance of material science and specification for items.
- (2) Develop selective ability for the use of materials.
- (3) Develop imagination for the suitability of particular material, based on its cost, transport, fixing work etc.
- (4) Acquire skill in writing detailed specification.
- (5) Get practice and refinement in above by repeatative experiences.

M.F. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE. 38/29
COURSE : SPECIFICATION AND BUILDING MATERIALS
COURSE CODE : 4.1

C O N T E N T S

| S.No. | Topic. | Details. |
|-------|----------------------------|--|
| 1. | Detail specification | I (i) Earth work and plinth (ii) Super structure and finishing (iii) Services (Plumbing, electrification, water supply, drainage of storm water) |
| 2. | Detail specification | II (i) Base concrete. (ii) C.R. Masonary (iii) D.P.C. Floors (iv) Steel work for door and windows. (v) R.C.C. works. (vi) Modern Techniques of external finishes. |
| 3. | Specification of Materials | (1) Stone (2) Brick (3) Cement (4) Sand (5) Aggregate (6) Timber (7) Floor Materials. |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

38/30

PROGRAMME : DIPLOMA IN ARCHITECTURE
COURSE : SPECIFICATION AND BUILDING MATERIALS
COURSE CODE : 4.1

LIST OF SESSIONAL/ STUDIO WORK.

1. Electrification - Presentation of telephone, T.V. cables, notations for fitting and fixtures.
2. Drafting
Specification - (i) for electrical conduits, ^{concealed & open wiring} cables, gradation of pipes/fitting/fixurs/
 - (ii) Salt glazed sanitary wares, different types of traps.
 - (iii) Technical specification for
 1. Cement
 2. Sand.
 3. Aggregate.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE. 38/31
COURSE : SPECIFICATION AND BUILDING MATERIALS
COURSE CODE : 4.1

SCHEME OF STUDIES

| S.No. | Topic. | Theory Hrs. | Studio sess. Hrs. | Total |
|-------|---------------------------|-------------|----------------------|-------|
| 1. | Detail specification (i) | 48 | - | 48 |
| 2. | Detail specification (ii) | 48 | - | 48 |
| Total | | 96 | - | 96 |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE
COURSE : SPECIFICATION AND BUILDING MATERIALS
COURSE CODE : 4.1

LIST OF BOOKS

| S.No. | Title. | Author | Publisher | Approx. Cost. |
|-------|-------------------------|------------|-----------|------------------|
| 1. | Estimating and Costing. | B.N. Dutta | | 150/- |
| 2. | Estimating and Costing. | Rangwala | | 150/- |
| 3. | Estimating and Costing. | Birdi. | | 150/- |

~~30~~
M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : STRUCTURE.

COURSE CODE : 4.2

38/32

R A T I O N A L E

The very existence of any building is solely dependent on how its structural component and structure in totality are sound to assess the strength of material and using its appropriate section needed for given condition is a matter of science in itself. Therefore this course provide all such instructional input on designing of structural members, like wall, column, beam, slab etc. The analytical ability developed in course of study will enable the students to work out strength and weaknesses of the structural member.

OBJECTIVE : The students will be able to

- (1) Obtain knowledge about structural theories and various assumption.
- (2) Develop analysis and design ability required for structural designs.
- (3) Develop precision in the designs.
- (4) Develop confidence in design of structural members.
- (5) Acquire skill to express the design numerically and graphically.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL

PROGRAMME : DIPLOMA IN ARCHITECTURE.
-COURSE : STRUCTURE.
COURSE CODE : 4.2

38/33

C O N T E N T S

| S.No. | Topic | Details. |
|-------|--------------------------|--|
| 1, | Scope | Students should have enough knowledge of structural behaviour to enable him to design buildings given in the curriculum. More emphasis on deriving and assuming different members in a building. |
| 2. | Terminology | Assumption of R.C.C. stress, strain, moment of Intertia, Modular ratio, Bending moment and shear force, modulus of elasticity. |
| 3. | Calculation for members. | Slab (oneways and two ways) Singly reinforced, simply supported beam, column without eccentricity, chajja, L bracket beam, simple timber beam and R.S.J. |

for

NOTE : All calculation of the elements will be / given data.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.
COURSE : STRUCTURE.
COURSE CODE : 4.2

38/34

LIST OF SESSIONAL WORK.

Assignments consisting problems (atleast 10 Nos.) on the following members.

- (a) Slab (one way and two ways)
- (b) Singly reinforced beam (simply supported)
- (c) Column without eccentricity.
- (d) Chajja and bracket beam
- (e) Simple timber beam
- (f) Calculation for quantity of steel in R.C.C. slab, beam.

32

M.E. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE

COURSE : STRUCTURE

COURSE CODE :: 4.2

38/35

SCHEME OF STUDY

| S.No. | Topic. | Theory Hrs. | Practical Hrs. | Total |
|-------------|-------------------------|-------------|----------------|-------|
| 1. | Scope | 10 | - | 10 |
| 2. | Terminology | 75 | - | 75 |
| 3. | Calculation of members. | 75 | - | 75 |
| Grand total | | 160 | - | 160 |

M.E. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE

COURSE : STRUCTURE

COURSE CODE : 4.2

LIST OF BOOKS.

| S.No. | Title | Author | Publisher | Approx. Cost. |
|-------|--|----------------|------------|---------------|
| 1. | Reinforced Cement Concrete. | Syal, Yoal | Wheeler | 90/- |
| 2. | Design of reinforced concrete structures. | S. Ramamrithan | DhancatRai | 115/- |
| 3. | Strength of Material | S. Ramamrithan | DhampatRai | 65/- |
| 4. | Strength of Material (Set of 2 volumes) | B.C. Punmia | Standard | 125/- |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL

PROGRAMME : DIPLOMA IN ARCHITECTURE

COURSE : COMPUTER AIDED DRAFTING

COURSE CODE : 4.3

38/36

R A T I O N A L E

Today computer has grown to become essential in the operations of business, engineering, medical, military, research, education, Government etc. It has also demonstrated itself especially in recent years to be a very powerful tool in design and drafting. Slowly computer based approaches are replacing traditional method of drafting and designing. Latest computer hardware have made engineering and architectural drawing more easier, accurate and faster to draw. Digitizers, mouse plotter, laser, printer etc. are some examples. Different softwares are available to assist in drawing and drafting.

AUTOCAD is one of such softwares used for Architectural and Engineering design and drafting. This course is designed for student to get them familiarized with AUTOCAD commands, so that they may be able to draw automated production drawing. With the help of AUTOCAD. Thus a course of computer aided drafting have become highly desirable at diploma level in Architecture branch.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE
COURSE : COMPUTER AIDED DRAFTING
COURSE CODE : 4.3

38/37

C O N T E N T S

| S.No. | Topic | Details. |
|-------|--|--|
| 1. | CAD fundamentals | CAD systems, features, advantages and application, Hardware requirement for stand alone and CAD systems and work station. Input and output devices of CAD systems. |
| 2. | Introduction to AUTOCAD | Starting AUTOCAD, Features, Main menu drawing editor, commands in screen menu. Text screen, command area status line. |
| 3. | Creating a (2-D) Drawing (a) Preparation of new drawing (b) Drawing commands : | Setting the units snap grid, limits, layers save and quit commands. Line, changing layers, F line, move, Redraw U, fillet, Mirror, sketches. Pedit, Hatch, F line, O snap, Arc, circle, Array, Zoom, block, ellipse, offset commands. |
| 4. | Changing an existing drawing. | Line type, change, stretch, Area, Undo, Measure, Inserts, text, view, Rotate, Upsilon icon, dim, dimscale. Dedit, d text, hor commands. |
| 5. | 3-D. Drawing. (a) Creating 3-D drawing. (b) Viewing-3-D Drawing | DDimodes, DDImodes, viewports, view points. Pan., Sol-box., Solfill., Redraw all, Soleye, Solsub, Solin, Regen all commands. Solmesh, Hide, Shadedge, shade, plot, Mslide V slide commands. |
| 6. | Installing and configuring AUTOCAD | Running. install, programme, Entering data in various screen of install programme, configuring various devices with AUTOCAD. |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : COMPUTER AIDED DRAFTING.

COURSE CODE : 4.3

38/38

LIST OF DEMONSTRATION AND ASSIGNMENTS (PRACTICALS)

- (1) Demonstration of various graphics package.
- (2) Functioning of various hardwares of CAD systems.
- (3) Demonstration of atleast four drawings illustrating the potential of AUTOCAD.
- (4) Use of demonstration of commands of AUTOCAD.
- (5) Drafting four production drawings using AUTOCAD commands.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.
COURSE : COMPUTER AIDED DRAFTING.
COURSE CODE : 4.3

38/39

SCHEME OF STUDIES

| S.No. | Topic. | Th. Hrs. | Pract.Hrs. | Total |
|-------------|---------------------------------------|----------|------------|-------|
| 1. | CAD Fundamentals. | 2 | 1 | 3 |
| 2. | Introduction to AUTOCAD | 2 | 4 | 6 |
| 3. | Creating a 2D _v drawing. | 8 | 24 | 32 |
| 4. | Changing an existing drawing. | 8 | 22 | 30 |
| 5. | Creating a 3-D. Drawing | 10 | 26 | 36 |
| 6. | Installing and configuring AUTOCAD | 2 | 3 | 5 |
| GRAND TOTAL | | 32 | 80 | 112 |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE. 2
 COURSE : COMPUTER AIDED DRAFTING.
 COURSE CODE : 4.3

LIST OF BOOKS

| S.No. | Title. | Author | Publisher | Approx. Cost. |
|-------|--|--------------------------------------|--------------------------------|---------------|
| 1. | The illustrated AUTOCAD Book. | Tom. Berghanser Paul. L. Schliene | S.K.M. Enterprise New Delhi | 90/- |
| 2. | Understanding computer graphics. | Indy. Tatchell less Howarth. | Usborne Computer Books. | £ 2.25 |
| 3. | Computer Graphics & CAD fundamentals. | Morris. | Wheeler | 60/- |
| 4. | Illustrated AUTOCAD Rel - II. | Schliene | B.F.B. | 150/- |
| 5. | Learn AUTOCAD | Grabowshi | B.F.B. | 45/- |
| 6. | CAD/CAM | Groonér & Zimmers. | P.H.I. | 80/- |

38/41

M.F. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : DESIGN- III.

COURSE CODE : 4.4

R A T I O N A L E

Design is the end results of what one conceives through imagination ruled by certain rules and limitations. The basic understanding of what the design is and how it is to be viewed and done is provided in the course with provision of certain experience that lead to the generation of thinking for creation for desired needs with wanted outcome.

Specific designs are also provided in the course to enable them to get acquainted with certain special feature and requirement. This course in addition to above serves as a fore-requisite to further learning in the design.

OBJECTIVE : The students will be able to :

- (1) Gain insight in to design considerations.
- (2) Develop thinking ability with development of imagination needed for building designs.
- (3) Develop confidence in accepting task.
- (4) Acquire skill of expression and presentation.
- (5) Develop positive attitudes for all that is good for good designs.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : DESIGN III.

38/42

COURSE CODE : 4.4

CONTENTS

| S.No. | Topic. | Details. |
|-------|--|---|
| 1. | Architectural Design General requirement. | (i) Principles, concepts, approach, governing, influence ^{ing} and limiting factor. (ii) type of structure. (iii) Expected architectural outcome. |
| 2. | Designing particular building. | (i) Basic principles and guideline for buildings like primary health centre, guest house, community centre, library etc. (ii) Design of outdoor spaces incorporating hard and soft Land scape with emphasis on site planning techniques. |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : DESIGN-III.

COURSE CODE : 4.4

LIST OF SESSIONAIS (PRACTICALS)

- (1) Two design proposals with plan, sections, elevations, perspectives and models showing the planning process adopted, planning of outdoor spaces clearly.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : DESIGN-III.

COURSE CODE : 4.4

38/43

SCHEME OF STUDIES

| S.No. | Topic. | Theory Hrs. | Studio Hrs. | Total Hrs. |
|-------|---|-------------|-------------|------------|
| 1. | Architectural Design General requirements. | 14 | 10 | 24 |
| 2. | Designing particular Building. | 34 | 150 | 184 |
| Total | | 48 | 160 | 208 |

NOTE : Two site visits for study per semester.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : DESIGN-III.

COURSE CODE : 4.4

LIST OF BOOKS.

| S.No. | Title | Author | Publisher | Approx. Cost. |
|-------|--|--------|-----------|---------------|
| 1. | Oregon experiment. | | | |
| 2. | Time less | | | |
| 3. | Space form and order. | | | |
| 4. | Graphics standard (Building type) | | | |
| 5. | Neufert Architects Data and all other books included in previous design subject list of books. | | | |

M.P. BOARD OF TECHNICAL EDUCATION, BENGAL.

WITH SEVENTH DIFINIA PROGRAMME IN ARCHITECTURE TO BE INTRODUCED IN 97-98
 AT GOVERNMENT WOMEN'S POLYTECHNIC IN M.P.

| J.No. Code. | Name of Course. | Scheme of Study contact. Hrs. P. W. | | Sessional Term work. | | Progressive Assessment. | | Board Examination. | | Duration | Marks | Remarks. | |
|-------------|-------------------------------|-------------------------------------|---------|----------------------|------|-------------------------|-----|--------------------|-----------|----------|-------|----------|-----|
| | | Theory | Lab. | Total | Lab. | I. | II. | Theory | Practical | | | | |
| 1. | 5.1 Estimation & Costing. | 5(80) | 2(32) | 7(112) | 25 | 25 | 10 | 10 | 1 | 3 Hrs. | 100 | - | - |
| 2. | 5.2 Building Construction III | 2(32) | 5(80) | 7(112) | - | 50 | 10 | 10 | 1 | 4 Hrs. | 100 | - | - |
| 3. | 5.3 Production Drawing | 2(32) | 6(96) | 8(128) | - | 50 | 10 | 10 | - | - | - | 1 | 50 |
| 4. | 5.4 Design IV. | 2(32) | 12(192) | 14(224) | - | 75 | 10 | 10 | 1 | 12 | 250 | 1 | 50 |
| | | 11(176) | 25(400) | 36(576) | 25 | 200 | 40 | 40 | 3 | - | 450 | 2 | 100 |

- NOTE:
- (1) No. of theory papers
 - (2) Total theory Marks
 - (3) No. of practicals
 - (4) Total Practical Marks.
 - (5) Implant Training Marks.
 - (6) Total marks of sessionals
 - (7) Ratio of theory marks & (Sessional + Prog. Assts. + Practicals + Implant Trg. Marks)
 - (8) Total Marks
 - (9) Passing Marks for (a) Theory 33% (b) Practicals- 40% (c) Sessionals- 60% (d) Implant Trg. 50%

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIFIGMA IN ARCHITECTURE.
COURSE : ESTIMATING AND COSTING.
COURSE CODE : 5:1

38/45

R A T I O N A L E

All economics activities have ^{their} roots in estimating. So also architecture. The design which are yet to be transformed in its material form and the structures which already have some life need to estimate for various purposes like materials, labours, cost, cost of services etc. Therefore this subject becomes essential for the area of architectures. The course aims at providing necessary input on current practices of estimating and costing. The emphasis is also laid on using computer for estimation. The student can develop analytical ability through the contents of course.

OBJECTIVES : The students will be able to

- (1) Appreciate the need and importance of the estimating and costing.
- (2) Acquire ability to prepare estimates
- (3) Develop confidence in the works of estimation.
- (4) Obtain insight into the contract and execution documents.
- (5) Develop attitude for self doing.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : ESTIMATING AND COSTING.

COURSE CODE : 5.1

38/46

C O N T E N T S

| S.No. | Topic. | Details. |
|-------|------------------------------|--|
| 1. | Types of estimation | (a) Phase-I Estimate. (b) Detailed Estimate. |
| 2. | Estimation Techniques | (a) Methods of taking out quantities. (b) Mode of measurement. (c) Schedule of rates. |
| 3. | Rate Analysis | C.R. Masonary, Brick Masonary, Super structure, R.C.C., Base concrete, double plaster, Door frames and paints in grill works. |
| 4. | Estimation through Computer. | Detail estimate with the help of computer software. |
| 5. | Contract and its executions. | - Item Rate tenders. - Tender documents. - Contract documents - important provisions of articles of agreements. - Inter relation of duties of an Architects, clerk of work and the contractor. |

M.T. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.
COURSE : ESTIMATING AND COSTING.
COURSE CODE : 5.1

38/47

SCHEME OF STUDIES

| S.No. | Topic. | Theory Hrs. | Pract. Hrs. | Total. |
|-------|------------------------------|-------------|-------------|--------|
| 1. | Types of estimation | 10 | - | 10 |
| 2. | Estimation techniques. | 20 | - | 20 |
| 3. | Rate analysis. | 10 | - | 10 |
| 4. | Estimation through Computer. | 20 | 32 | 52 |
| 5. | Contract and its execution | 20 | - | 20 |
| Total | | 80 | 32 | 112 |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE

COURSE : ESTIMATING AND COSTING.

COURSE CODE : 5.1

38/48

LIST OF THE SESSIONAL WORK (PRACTICAL)

- (1) Work out an estimate (Detailed) of a typical building about 60-70 Sqm. with sanitary and water supply estimation.
- (2) 1. Problem manually 2. Problem on computer

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : ESTIMATING AND COSTING.

COURSE CODE : 5.1

LIST OF BOOKS.

| S.No. | Title | Author | Publisher | Approx.cost. |
|-------|--|-----------------|---|--------------|
| 1, | Estimating and costing in Civil Engineering Theory and Practice. | Dutta B.N. | UPS Publishers' Distributors Ltd New Delhi. | |
| 2. | Valuation | Roshan Nanavati | Surjeet Publication | 202/- |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.
COURSE : BUILDING CONSTRUCTION- III.
COURSE CODE : 5.2

38/49

R A T I O N A L E.

The architectural designs can not ^{be} either done or understood by one who has not learnt how the building are constructed. Thus the knowledge of building construction becomes essential. This course aims at providing such ~~ne~~ necessary input regarding structure, frame, roofs etc. The contents of the course are selected considering the level of learning and its suitability for further levels.

Emphasis is laid not only on understanding the theory of various components of the building but also on its drawing and presentation.

OBJECTIVE : The students will be able to

- (1) Acquire theoretical knowledge of building construction.
- (2) Develop thinking and design ability needed for building frames and the components.
- (3) Gain confidence in reading and preparing construction drawing.
- (4) Obtain a skill of architectural drawing.
- (5) Develop attitude for self drawing.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : BUILDING CONSTRUCTION-III (5th Sem.)

COURSE CODE : 5.2

38/50

C O N T E N T S

| S.No. | Topic. | Details. |
|-------|--|--|
| 1. | Stell Trusses. | Introduction of the all types of trusses. Tubular and angled, showing members. tension and compression Chamber of trusses. Different parts of of various types trusses/for example North light, monitor. Knowledge of fabrication & errection of trusses |
| 2. | R.C.C. Frame Structure | Detail of slabs, beams, canopies staircase. Lintel, Chajja footings Poach, Preparation of Bar Bending schedule. |
| 3. | Showing different types of water proofing treatment. | Damp proofing. course, Different types of w.p. proofing for terrace and basements. |
| 4. | Expansion joint | Column, Beam, Slab, Masonary work, floor. |
| 5. | Sliding Door , Sliding folding door | In timber and Aluminium section. |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.
COURSE : BUILDING CONSTRUCTION-III.
COURSE CODE : 5.2

LIST OF SESSIONALS/ STUDIO WORK.

38/51

- 1st Problems in tubular trusses.
- 1st problems of truss in angles :
- Key plan and section of north light truss/ and monitor truss.
- Details of slab sections beams, canopies, staircase for a given problems.
- Section showing damp proofing and water proofing in terraces.
- Section showing water proofing treatment of basement.
- Section showing expansion joint in the scale 1 : 20
- 1 problems of sliding and sliding **folding** door each.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : BUILDING CONSTRUCTION-III

COURSE CODE : 5.2

SCHEME OF STUDIES

38/52

| S.No. | Topic. | Theory Hrs. | Studio Hrs. | Total. |
|-------|-------------------------|-------------|-------------|--------|
| 1. | Steel truss | 04 | 20 | 24 |
| 2. | R.C.C. frame structure. | 08 | 20 | 28 |
| 3. | Water proofing. | 08 | 20 | 28 |
| 4. | Expansion joint | 04 | 08 | 12 |
| 5. | Sliding/Folding doors | 08 | 12 | 20 |
| Total | | 32 | 80 | 112 |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : BUILDING CONSTRUCTION-III.

COURSE CODE : 5.2

LIST OF BOOKS.

| S.No. | Title | Author | Publications | Approx. cost. |
|-------|-------|--------|--------------|---------------|
|-------|-------|--------|--------------|---------------|

As per list of books for previous semester.

M.E. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.
COURSE : PRODUCTION DRAWING.
COURSE CODE : 5.3

R A T I O N A L E

38/53.

Any design project has no meaning unless it is possible to create it in material form three dimensionally. This execution is possible only if the designer has abilities to translate it in to production drawing. Preparing these drawing is a technique and skill in itself. Therefore this course provides instructional input which enable the students to develop themselves fit to produce working drawing. Finer thinking needed for detailing in these drawing can ^{be} ~~develop~~ ^{ed} only out of learning and self doing experiences. The course aims at preparing students so as to be suitable for doing it for either for own design or some body else.

OBJECTIVE : The students will be able to

- (1) Appreciate need and importance of production drawing necessary for execution of the project.
- (2) Acquire skills in preparing drawing and its presentation.
- (3) Develop finer thinking for minute and intricate detailing.
- (4) Develop confidence in working independently.
- (5) Develop working capacity needed for production drawing.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : PRODUCTION DRAWING.

COURSE CODE :: 5.3

38/54

C O N T E N T S

| S.No. | Topic. | Details. |
|-------|------------------------------------|--|
| 1. | Introduction | - Pre-requisites for production drawing - Techniques of preparing production drawing in terms of scale size presentation dimensioning tabulation. |
| 2. | Presentation of services. | - Plan and details necessary for sanitary, water supply and electrical services. |
| 3. | Detailing | - Entrance, door, stair, railing grills, shelves, specials fixtures. |
| 4. | Corporation Drawing | - Components, scales formats. |
| 5. | Preparation of production drawing. | - Sessional/ studio only. |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : PRODUCTION DRAWING.

COURSE CODE : 5.3

38/55

LIST OF STUDIO WORKS (PRACTICALS)

1. Preparation of production drawing for the architectural drawing which the candidate has designed in previous semester. The requirements are :
 - (i) Foundation plan
 - (ii) Ground and upper floor plans.
 - (iii) Roof plan showing churra ^(related to rain water drain) and rain water pipe.
 - (iv) Section and elevation (only outlines of concrete members.)
 - (v) Layout for special areas like kitchen, toilet, plan and sectional elevation.
 - (vi) Layout of electrical distribution and fitting.
 - (vii) Section of staircase for two subsequent flights.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : PRODUCTION DRAWING.

COURSE CODE : 5.3

38/56

SCHEME OF STUDIES

| S.No. | Topic. | Theory Hrs. | Practical Hrs. | Total. |
|-------|-----------------------------------|-------------|----------------|--------|
| 1. | Introduction | 6 | - | 6 |
| 2. | Presentation of services | 10 | 8 | 18 |
| 3. | Detailing | 12 | 8 | 20 |
| 4. | Corporation Drawing | 4 | - | 4 |
| 5. | Preparation of production Drawing | - | 80 | 80 |
| Total | | 32 | 96 | 128 |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL

PROGRAMME : DIPLOMA IN ARCHITECTURE

COURSE : PRODUCTION DRAWING.

COURSE CODE : 5.3

LIST OF BOOKS

| S.No. | Title | Author | Publisher | Approx. Cost. |
|-------|-------------------------|--------------------|-----------|---------------|
| 1. | Architectural Detailing | Allene | - | \$ 55.59 |
| 2. | Building Drawing | Shah Kale & Patki. | | |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE
COURSE : DESIGN-IV
COURSE CODE : 5.4

38/57

R A T I O N A L E

Imagination, creativity and innovative ability of students of architecture find their outlet in creating good designs. The design situations are varied. Some time the temporary structure of highest architectural merits are required while on the other hand they may be required to design structure with variety of constraints and limitation. This course provides all such experience of designing. More emphasis is laid on learning by doing and learning to learn. Design visions are expected to be widened through meaningful aesthetic creation of structure.

OBJECTIVE : The students will be able to :

- (1) Obtain insight into the design requirements and limitation on the design.
- (2) Acquire skill in preparing beautiful and sound design for all type of building together with presentation.
- (3) Gain mastery in architectural design for smaller projects.
- (4) Gain confidence to design in complex design situation.
- (5) Develop attitudes to know the problems and resolve them independently or in a group.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPICMA IN ARCHITECTURE
COURSE : DESIGN- IV.
COURSE CODE : 5.4

38/58

C O N T E N T S

| S.No. | Topic. | Details. |
|-------|-----------------------|--|
| 1. | Temporary Structural. | Exhibition stall, Pavilions, Informations centres, Gates, using canvas, steel, bamboo timber cloth, rags etc. |
| 2. | Building Design | Design incorporating lift, fire escape ducts, courts of repetitive and non repetitive multi storeys with application of byelaws as given in Bhoomi Vikas Adhinium and emphasis on presentations and drafting |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPICMA IN ARCHITECTURE
COURSE : DESIGN -IV
COURSE CODE : 5.4

LIST OF SESSIONS/STUDIO

1. One design proposals from each group mentioned above with all drawing and models.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE

COURSE : DESIGN- IV.

COURSE CODE : 5.4

38/59

SCHEME OF STUDIES

| S.No. | Topic. | Theory Hrs. | Studio Hrs. | Total Hrs. |
|-------|---------------------|-------------|-------------|------------|
| 1. | Temporary structure | 14 | 70 | 84 |
| 2. | Building Design. | 18 | 122 | 140 |
| Total | | 32 | 192 | 224 |

NOTE : Two site visits per semester to study the above mentioned class of buildings.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : DESIGN -IV

COURSE CODE : 5.4

LIST OF BOOKS

| S.No. | Title | Author | Publisher | Approx. Cost. |
|-------|-------|--------|-----------|---------------|
|-------|-------|--------|-----------|---------------|

As per list of books for previous semester.

U.F. BOARD OF TECHNICAL EDUCATION, U.P.

WITH SELF EMPLOYMENT PROGRAMME IN ANSHITADURA TO BE INTRODUCED IN 197-98
AT GOVERNMENT WOMEN'S POLYTECHNIC IN U.P.

| S.No. Code. | Name of Course. | Scheme of Study contact Hrs. per week. | | Term Lab. work. | | Progressive Assessment. | | Board Examination. | Theory Duration Marks (Viva.) | Practical Marks (Viva.) | Remarks. | |
|-------------|---|--|---------|-----------------|-----|-------------------------|--------|--------------------|-------------------------------|-------------------------|----------|----|
| | | Theory | Lab. | Total | I. | II. | paper. | | | | | |
| 1. | 6.1 Building Services. | 6(96) | 2(32) | 8(128) | 30 | 20 | 10 | 10 | 1 | 3 Hrs. | 100 | - |
| 2. | 6.2 Town Planning and Environmental Engineering | 6(96) | 2(32) | 8(128) | 30 | 20 | 10 | 10 | 1 | 3 Hrs. | 100 | - |
| 3. | 6.3 Entrepreneurship and Management. | 6(96) | -(-) | 6(96) | 50 | - | 10 | 10 | 1 | 3 Hrs. | 100 | - |
| 4. | 6.4 Design Project. | 1(16) | 13(208) | 14(224) | - | 150 | 10 | 10 | - | - | - | 1 |
| | | 19(304) | 17(272) | 36(576) | 110 | 190 | 40 | 40 | 3 | 300 | 300 | 1 |
| | | | | | | | | | | | | 75 |

NOTE: (1) No. of theory papers 3 (7) Ratio of theory marks 300 : 530
 (2) Total theory marks 300 & (Sessionals + Prog. Asst. + Practical + Implant Trg. (Marks)
 (3) No. of Practicals 4
 (4) Total Pract. Marks. 75
 (5) Implant Trg. Marks 75 (in vacation) (8) Total Marks : 830
 (6) Total marks of sessionals, Prog. Asst., Practicals and Implant Training. 530 (if Vth, VIth & 7th semester.)
 (9) Passing marks for (a) Theory - 33%
 (b) Practicals- 40%
 (c) Sessionals- 60%
 (d) Implant Trg.- 50%

38/98

M.F. BOARD OF TECHNICAL EDUCATION, BHCPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE
COURSE : ~~BUILDING SERVICES.~~
COURSE CODE : 6.1

38/61

R A T I O N A L E

Human life and its comforts are basically dependant on the services he has at home and at place of his work. Present day experiences number of technological and functional advance in designing laying and upkeep of services. This course provides a basic knowledge about the building services in all its related areas. The emphasis is laid on its smooth employment in all types of building so that the life is at ease. The course also aims at enabling students to design building projects commensurate with the expected services.

OBJECTIVES : The student will be able to
Gain

- (1) / Knowledge about different types of services.
- (2) Prepare a frame work for layout of services.
- (3) Develop confidence in design considerations.
- (4) Achieve skill in presenting services layout.
- (5) Modify the existing services pattern and modernize it.

M.P. BOARD OF TECHNICAL EDUCATION, MUMBAI.
 PROGRAMME : DIPLOMA IN ARCHITECTURE
 COURSE : BUILDING SERVICES.
 COURSE CODE : 6.1

C O N T E N T S

38/62

| S.No. | Topic | Details |
|-------|-----------------------------|--|
| 1. | Introduction | - Introduction to various services and scope, Importance of services. |
| 2. | Water supply | - Identify various services of water supply - per capita water consumption in cities. - water supply to building from public water supply line. - Drawing showing water supply for a ground floor building. - Showing different valves and taps, etc. - Section through a residential building showing water supply system. |
| 3. | Sanitary services | - Types of plumbing systems single stack, two stack partially ventilated |
| 4. | House fittings | - Wash basin, w.c. pan, flushing system traps etc. |
| 5. | Drainage layout | - Pipes/drains, types of pipes, joints of pipes and principles of laying pipe lines - man hole and intercepting trap, chamber, ventilation of drainage, location of man hole. |
| 6. | Septic tank | - Theory, concept, functioning and design aspect. |
| 7. | Waste disposal (Dry refuse) | - Types of industrial waste and domestic waste - Disposal of dry refuse. |
| 8. | Mechanical Services. | - Air conditioning, Natural and forced ventilation - Air conditioning principles. |
| 9. | Electrical Services. | - Preparation of circuit Diagram (complete with colour coding) - Drawing showing under ground cable connections of 3 phase metre - Standard of illumination; lux, foot candles for different activities. - Day light limitation in the interiors with special reference to hot humid & hot arid regions. - Reflectivity of different surfaces in interiors. - Different lighting systems. |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE

COURSE : BUILDING SERVICES

COURSE CODE : 6.1

38/63

LIST OF SESSIONALS AND ASSIGNMENTS

1. Section through ^{w.c. for multistoried} residential building showing water supply systems and sanitary system.
2. Preparation of house drainage layout
3. Designing and Drawing septic tank.
4. Sketch diagram of centrally air conditioned building.
5. Preparation Drawing of circuit diagram.
6. Drawing for under ground cable.
7. Sketches for different lighting systems.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE

COURSE : BUILDING SERVICES

COURSE CODE : 6.1

SCHEME OF STUDIES

| S.No. | Topic. | Th. Hrs. | Pr. Hrs. | Total |
|-------|----------------------|----------|----------|-------|
| 1. | Introduction | 6 | - | 6 |
| 2. | Water supply | 18 | 4 | 22 |
| 3. | Sanitary services. | 16 | 6 | 22 |
| 4. | House fittings. | 8 | 4 | 12 |
| 5. | Drainage layout | 8 | 6 | 14 |
| 6. | Septic tank | 5 | 2 | 7 |
| 7. | Waste disposal. | 5 | - | 05 |
| 8. | Mechanical services. | 10 | - | 10 |
| 9. | Electrical services. | 20 | 10 | 30 |
| Total | | 96 | 32 | 128 |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE

COURSE : BUILDING SERVICES.

COURSE CODE : 6.1

LIST OF BOOKS

| S.No. | Title | Author | Publisher | Approx. Cost. |
|-------|---|--------------|-----------|---------------|
| 1. | Indian Practical Civil Engg. Handbook. | P.N. Khanna. | Engineers | 93.00 |
| 2. | Water supply Sanitation | Rangawala | - | |
| 3. | -do- | Hussain | | |
| 4. | Electric wiring | Uppal. | | |
| 5. | Air conditioning | Dandurval | | |
| 6. | National Building Code. | | | |

M.F. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.
COURSE : TOWN PLANNING AND ENVIRONMENTAL ENGINEERING.
COURSE CODE : 6.2

R A T I O N A L E

38/65

Out of present burning topics that bother human being is the environmental quality. Man made activities are mainly responsible for poor quality of environment. These activities are basically concentrated in urban area. Thus knowledge of human settlements and degraded environment caused by industrial isotion and poor housing condition. Therefore this course aims at provding all such basic knowledge by which they will gain insight into the gravity of the situation and they can come across various measures being undertaken in the areas of town planning, its implementation and waste disposal systems.

OBJECTIVES : The students will be able to

- (1) Appreciate the need of town planning and improvement of environments.
- (2) Obtain insight about degree of deterioration of environment in town and expected measure.
- (3) Gain confidence through self doing.
- (4) Develop positive attitudes for city planning and environmental planning.
- (5) Achieves skill in devising solution and recommending measures to problem areas.
- (6) Develop attitudes for group working.

M.F. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : TOWN PLANNING AND ENVIRONMENTAL ENGINEERING

COURSE CODE : 6.2

C O N T E N T

38/66

| S.No. | Topic | Detail. |
|-------|-------|---------|
|-------|-------|---------|

1. Development of Towns. Origin of towns, the principles and the theories.
2. Physical characteristics of town. Based on functions transportation systems. Outer form, geography and land scape.
3. Element of city plan (a) Elements of city
Based on land uses. and The study of residential, commercial and public institution, land use in detail.
4. Environmental Engineering. (b) Zoning & zoning regulations.
 - (i) Causes degree of degradation of environment.
 - (ii) Environmental degradation : reference to residential and industrial area.
 - (iii) Measures to improve the environmental condition.

38/67

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL

PROGRAMME : DIPLOMA IN ARCHITECTURE
 COURSE : TOWN PLANNING AND ENVIRONMENTAL ENGINEERING
 COURSE CODE : 6.2

LIST OF SESSIONALS

1. Presentation of density, zones, road network/patterns, open spaces, shopping, parking.
2. Preparing environmental improvement scheme of residential/ industrial area.
3. Study of small existing residential, commercial area.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL

PROGRAMME : DIPLOMA IN ARCHITECTURE
 COURSE : TOWN PLANNING AND ENVIRONMENTAL ENGINEERING
 COURSE CODE : 6.2

SCHEME OF STUDIES

| S.No. | Topic | Theory Hrs. | Studio Hrs. | Total |
|-------|-------------------------------------|-------------|-------------|-------|
| 1. | Brief History | 10 | - | 10 |
| 2. | Physical character stick of town | 20 | 8 | 28 |
| 3. | Element of city plan. | 40 | 16 | 56 |
| 4. | Environmental Engineering | 26 | 8 | 34 |
| Total | | 96 | 32 | 128 |

38/58

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL

PROGRAMME : DIPLOMA IN ARCHITECTURE
 COURSE : TOWN PLANNING AND ENVIRONMENTAL ENGINEERING
 COURSE CODE : 6.2

LIST OF BOOKS

| S.No. | Title | Author | Publisher | Approx.cost |
|-------|---|---|--|-------------|
| 1. | Town Planning | Rangawala | | |
| 2. | Town Planning | Modak Ambdekar | | |
| 3. | Bhumi Vikas Adhiniyam | M.P. Government (Town Planning Department.) | M.P.Government Publication | |
| 4. | Principles & Practice in Town Planning. | Lewis Keeble. | | |
| 5. | Urban Pattern City Planning and Design. | B. Gallion | CBS. | |
| 6. | Fundamentals of Town Planning. | G.K. Hiraskar | Dhanpat Rai. | |
| 7. | Planning the Indian City. | M.H. Banch | UBS Publishers & Distributors New Delhi. | |
| 8. | Architecture and Town Planning. | Agrawal. | | |

38/69

-67-

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : ENTREPRENEURSHIP AND MANAGEMENT

COURSE CODE : 6.3

R A T I O N A L E

should

Architectural technicians/equip themselves with necessary inputs so as to enter into intreprenurship where they are expected to manage their own undertaking. With this in view professional requirements and expected inter-actions need to be studied this course provide all such basic knowledge and skill to be competent to either set up their own organisation or carry out the instruction of an architect, project sites and out side organisation.

OBJECTIVES : The students would be able to

- (1) Gain insight into the aspects of entrepreneurship and management.
- (2) Obtain knowledge about organisational working.
- (3) Equip themselves for the required professionalism.
- (4) Acquire managerial skills.
- (5) Develop attitude for working in a group.

38/71

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE
COURSE : ENTREPRENEURSHIP AND MANAGEMENT.
COURSE CODE : 6.3

LIST OF THE SESSIONAL WORK.

- (1) Two assignments on entrepreneurship associated with case studies and proposals.
- (2) Two assignments of managements consisting case studies.

38/72

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.
COURSE : ENTREPRENEURSHIP AND MANAGEMENT.
COURSE CODE : 6.3

SCHEME OF STUDIES

| S.No. | Contents. | Theory Hrs. | Pract.Hrs. | Total. |
|-------|---------------------------|-------------|------------|--------|
| 1. | Introduction | 02 | - | 02 |
| 2. | Entrepreneurship Process | 08 | - | 08 |
| 3. | Functional Aspect. | 18 | - | 18 |
| 4. | Entrepreneurship policies | 18 | - | 18 |
| 5. | Management organisation | 20 | - | 20 |
| 6. | Systems managements. | 15 | - | 15 |
| 7. | Leadership | 15 | - | 15 |
| Total | | 96 | - | 96 |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.
COURSE : ENTREPRENEURSHIP AND MANAGEMENT
COURSE CODE : 6.3

LIST OF BOOKS

| S.No. | Title | Author | Publisher | Approx.Cost. |
|-------|--|--------------------|-----------|--------------|
| 1. | Project Planning and Entrepreneurship. | Banga T.R. | | |
| 2. | Entrepreneurship Development | Bhatnagar Agrawal. | | |

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : DESIGN PROJECT

COURSE CODE : 6.4

R A T I O N A L E

In any educational programme a project as a course is provided to enable the student to handle it independently with guidelines given by the faculty so that he is exposed to live situation gaining live experience. It also becomes essential for the assessment of achievement based on application of all levels. The course therefore aims and allows students for creating most meaningful project demonstrating his learnt integrated knowledge of previous semesters.

It infuses in him the confidence to take up challenge or task.

OBJECTIVE : The student will be able to

- (1) Gain insight into project situation knowing strength and weakness of sites, its constraints etc.
- (2) Develop ability to solve the problems faced in the course of project.
- (3) Develop decision making ability.
- (4) Develop ability to learn more and more.
- (5) Acquire skill of presentation and expression.
- (6) Develop attitudes for recognising the importance of useful information and persons.

38/74

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : DESIGN PROJECT

COURSE CODE : 6.4

C O N T E N T S

| S.No. | Topic. | Details. |
|-------|------------------|--|
| 1. | Case study | (i) Study of movement in and around building. (ii) Relative distribution of areas. (iii) Analysis of building with surrounding based on strength and weakness. (iv) User's comment. |
| 2. | Project proposal | (i) Working out the forms of functional Areas and their volumes. (ii) Functional analysis of spaces. (iii) Removal of constraints preparation of project concept. (iv) Preparing the detail design. |

38/75

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.
COURSE : DESIGN PROJECT
COURSE CODE : 6.4

LIST OF SESSIONALS

- (1) Case study analysis drawing.
- (2) Project proposal with all drawings.
- (3) Report - Write up explaining the criteria, methodology and reflecting the achievements should be prepared on the following lines
 - (i) Rationale.
 - (ii) Objective
 - (iii) Back ground
 - (iv) Evolution of concept.
 - (v) Parameters and limitations.
 - (vi) Special consideration
 - (vii) Achievement based on expected outcomes.
 - (viii) Special experience if any.
 - (ix) Conclusion.

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE
COURSE : DESIGN PROJECT
COURSE CODE : 6.4

LIST OF BOOKS

| S.No. | Title | Author | Publisher | Approx. Cost. |
|-------|-------|--------|-----------|---------------|
|-------|-------|--------|-----------|---------------|

List as per previous semesters.

28/76

-74-

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : DESIGN PROJECT

COURSE CODE : 6.4

SCHEME OF STUDIES.

| S.No. | Topic. | Theory Hrs. | Pract.Hrs. | Total. |
|-------|------------------|-------------|------------|--------|
| 1. | Case study. | 08 | 100 | 108 |
| 2. | Project proposal | 08 | 108 | 116 |
| Total | | 16 | 208 | 224 |

38/77

M.P. BOARD OF TECHNICAL EDUCATION, BHOPAL.

PROGRAMME : DIPLOMA IN ARCHITECTURE.

COURSE : TRAINING

COURSE CODE : 6.5

T R A I N I N G

Six weeks practical training shall be undertaken between 5th to 6th semester. The students shall be placed in private or Government organisation with following object.

- (1) Know organisation^{al} patterns.
- (2) Types of work to performed by diploma architecture.
- (3) Method of keepin records of drawings and documents.
- (4) Collect drawing works done during the period and get experience certificate from Regt. Architects Office Government organisation. Certificate to be sent directly to Principal of Polytechnics by the organisation.
- (5) Collect literature and information which will guide for project of final semester.

The student will be required to maintain daily diary in which he/she will record the daily work done during training period. After coming back to the institute she will present seminar and face viva voce for assesment.