

PROPOSED (REVISED) STRUCTURE FOR FOURTH YEAR

B.ARCH. (Interior Design)

(TO BE IMPLEMENTED FROM 2011-12)

Sr. No.	Subject Code	Name of Subject	Head	Teaching Scheme				Examination Scheme		
					Lecture Periods	Studio Periods	Total Periods	Term I Marks	Term II Marks	Total Marks
1a	413441	Architectural Project-I	SS	Term I	--	3	3	100	--	100
1b	413442	Architectural Project-II	SV	Term II	2	10	12	--	500	500
2a	413443	Architectural Design IV a	SV	Term I	2	7	9	300	--	300
2b	413444	Architectural Design IV b	Design Paper						100	100
3	413425	Advanced Construction, Materials & Services	SV		4	4	8	150	150	300
4a	413426	Elective I & II	SS	Term I	1	2	3	50 + 50	--	100
4b	413427	Elective III & IV	SS	Term II	1	2	3	--	50 + 50	100
5a	413445	Interior Design-Theory & Practice a	SS		2	4	6	50	50	100
5b	413446	Interior Design-Theory & Practice b	Theory Paper						100	100
6a	413430	Professional Practice a	SS		2	2	4	50	50	100
6b	413431	Professional Practice b	Theory Paper						100	100
7a	413447	Town Planning	SS	Term I	1	2	3	50	-	50
7b	413448	Contemporary Architecture	SS	Term II	1	2	3		50	50
		TOTAL			12	24	36	800	1200	2000

ARCHITECTURAL PROJECT –I & II

Sr. No	Subject Code	Name of Subject	Head	Teaching Scheme			Examination Scheme			
					Lecture Periods	Studio Periods	Total Periods	Term I Marks	Term II Marks	Total Marks
1a	413441	Architectural Project-I	SS	Term I	--	3	3	100	--	100
1b	413442	Architectural Project-II	SV	Term II	2	10	12	--	500	500

Term I

Sessional- Internal 50 -External 50 Total 100

TERM II

Sessional –Internal 200, External 200, Viva-voce 100 (Internal 50 and External 50) Total 500

ARCHITECTURAL PROJECT –I (TERM I)

• OBJECTIVES

- To introduce the students to research in architecture and its significance in the architectural practice.
- To introduce the students the types of research in architecture and the process of formulating a research plan.
- To introduce the students to various methods of research in architecture, their relative advantages and disadvantages and their applications.
- To enable the students to understand to link research and design.
- To introduce the students to the technical writing.

• COURSE OUTLINE

Introduction to research in architecture – its need, significance, research design, types of research, literature study, methods of research in architecture, application of research in design.

• TEACHING PLAN

In order to achieve the two-fold aim of acquainting the students with the research process and then enabling them to relate research to design, following teaching plan is suggested.

1. Research – meaning, need, significance and application in architecture.
2. Types of research in architecture.
3. Steps in undertaking a research project.
4. Methods of research – Data collection using survey, observation, case study, content analysis using secondary data sources.
5. Literature sources.
6. Communicating research and technical writing.
7. Research for architectural project.
8. Preparing theoretical framework for the Arch. Project II (defining scope, objectives, identifying type of data (primary / secondary) required for design, identifying case studies, data sources and methods).

- **SESSIONAL WORK**

1. A **Tutorial** on the topic nos. 1 to 4 in the teaching plan above.(25% of total marks)
2. **Writing a summary** of about 1000 words on any one book / part of a book (chapter) related to architecture, read by the student. (25% of total marks).
3. Undertaking **small research** on a topic, preferably related to the Arch. Project II topic of the student and presenting it in form of a **research paper** of about 2000 words.(50% of total marks).

- **RECOMMENDATIONS**

1. **Topic for Research** : It is preferable that the topic of research is related to the “Architectural Project II” the student intends to undertake. This will help the student to extend the findings of the research to the architectural design. However depending upon the philosophy of a particular college, the college may allow topics focusing upon a particular area related to their mission statement, which may result in topics, which are unrelated to the Architectural Project II.
2. **Guide** : The guides should have minimum 5 yrs. of teaching / professional experience.

- **Recommended Books**

1. Babbie, E. *The Practice of Social Research*, (third edition). Belmont :Wadsworth Publishing Co. 1983.
2. Groat, L. & Wang, D. *Architectural Research Methods*, NY : John Wiley and Sons Inc. 2002.
3. Kothari, C.R. *Research Methodology : Methods and Techniques*, New Delhi : Wishwa Prakashan. 2005.
4. Sanoff, H. *Methods of Architectural Programming*, Dowden Hutchinson and Ross, Inc. Vol. 29, Community Development Series. 1977.
5. Sanoff, H. *Visual research methods in design*, USA : Van Nostrand Reinhold. 1991.

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ARCHITECTURAL PROJECT –II (TERM II)

OBJECTIVE :

The purpose of the project is to allow the student to pursue an independent line of study for a defined period in considerable depth bringing together various skills from studio and classroom which have been acquired over the previous years. It is supposed to be a comprehensive summary of what has been learned to date by the student, so technical competence must be exhibited in all aspects of the project.

This is an introduction and appreciation of the design process through dealing with more complex buildings and larger project sites. The concept of building design as a multi-disciplinary approach is to be introduced. Integration of structural, mechanical, and environmental control systems with the building function, form, and spaces' organization is to be emphasized. Students should be encouraged to consider some of the concepts such as contemporary issues and trends, environmental sensitivity, accessibility for the physically challenged, alternative energy sources, safety aspects of the users/inhabitants, heritage sensitivity and professionalism in the construction and architectural industry. Students should exhibit their competence with reference to:

- Site analysis and understanding its implications on design and apply different approaches to design problem solving considering context.

- Exploring design alternatives to resolve form-function relationship.
- Developing an architectural design considering several building engineering systems integration.
- Utilizing computing essentials, IT, and contemporary resource in the analysis and solution of architectural design-related problems.
- Communicating design through visual, oral and written media.

COURSE OUTLINE

The Project should include research, program development, site selection and analysis and design demonstration.

The expected effort must be commensurate with the assigned time and the level of expertise required for a student who is at the final stage of award of B.Arch Degree.

While there is no limitation on the typology and scale of architectural project, following guidelines may be considered for deciding the scope of the project. Acceptability will be determined based on clarity of the problem statement, the relative complexity of the problem, and a judgment of the ability of the student to deal with the problem by the Programme coordinator at the institute. A project which concentrates on issues of large scale development must include a minimum of architectural content that demonstrates the relationship of the project to built form.

- In a relatively simple project, however, detailed investigations would be expected. The project must include investigations that go well beyond those contained in a basic architectural presentation of plans, sections, and elevations.
- All projects must demonstrate the ability to create architectural form and resolve relevant issues of site, structure and construction.
- This project is the integration of structural, environmental controls, building envelope, and building service systems in the design of the buildings. Fundamental design issues related to programming, aesthetics, and function are integrated with the above. Emphasis is placed on developing a systematic approach to architectural design while simultaneously dealing with the development of design theory and intellectual inquiry.

Research Requirements

The project is an investigation of architectural principles and the testing of them in the form of a design exercise. The process assumes that the students will research the critical principles that surround their topic and the characteristics of the selected building type as well. This research may form part of the Project I phase, and will extend into the Project II. The research should cover the Idea, Case Studies, Site Analysis, along with a complete bibliography of the sources student have consulted and intend to consult during the Project II.

SESSIONAL WORK:

Graphical : Students shall produce a Comprehensive set of drawings in which project intent is clearly delineated. The candidate must prepare drawings adequate to explain the design in the form of hard copies/printouts with adequate graphical quality. The three dimensional presentation in the form of perspective views, models should preferably accompany to demonstrate the overall architectural character of the project as a whole. The scope and scale of project would dictate the details expected in a project.

The report : The report should contain Introduction to design, problems, limitations, and design criteria. Collection of data, case studies required in the design process for analysis and evaluation, design solutions with illustrations in standard format.

ARCHITECTURAL DESIGN IV a & b

Sr. No	Subject Code	Name of Subject	Head	Teaching Scheme			Examination Scheme			
					Lecture Periods	Studio Periods	Total Periods	Term I Marks	Term II Marks	Total Marks
2a	413443	Architectural Design IV a	SV	Term I	2	7	9	300	--	300
2b	413444	Architectural Design IV b	Design Paper						100	100

Term I

Sessional : Internal 125 External 125 Viva-voce 50 (Internal 25 + External 25) Total 300

OBJECTIVE

Introduce students progressively to designing for larger environmental contexts (preferably Indian) and for more complex multifunctional complex of buildings / situations like mass scale residential, institutional, commercial, transportation, health-care facilities.

COURSE OUTLINE

Any one of the following topics shall be selected for design demonstration:

- A. Design of Urban Large Scale/density based housing with minimum 100 tenements.
- B. Design of multifunctional complex of buildings in the urban context.

Issues related to the growing problems of urban areas shall be explored. Emphasis on the design with relation to the contextual environment, traffic and planning controls and impact analysis. Socio-economic determinants, legislative (Building bye-laws, GDCR, CRZ, EPA, ECBC etc.), economic constraints and technological alternatives shall be studied in detail. Emphasis should be on development of the ability of the student to tackle complexities of scale and multiple functional aspects simultaneously- and should include:

- Site Planning
- Structural considerations
- Interior space planning
- Environmental planning
- Building Services
- Climate responsive, Energy efficient and exhibiting qualities of sustainable architecture.

Emphasis shall be given to the preparation of self-explanatory drawings, as in an Architectural Competition.

SESSIONAL WORK

Complete Self-explanatory project, graphically presented in the form of hard copies / printouts showing comprehensive understanding of the design and implementation process as mentioned in the course outline. All Architectural Design Assignments and submissions shall lay emphasis on designing Earthquake Resistant Structures, which will be worked out in consultation with the Teacher of Structures and the submission work will reflect various technologies adopted.

REFERENCE BOOKS :

All available books on Architectural Design.

ADVANCED CONSTRUCTION, MATERIALS & SERVICES

Sr. No	Subject Code	Name of Subject	Head	Teaching Scheme			Examination Scheme		
				Lecture Periods	Studio Periods	Total Periods	Term I Marks	Term II Marks	Total Marks
3	413425	Advanced Construction, Materials & Services	SV	4	4	8	150	150	300

Sessional-Term I –Internal 50, External 50 Viva 50 (Internal 25 + External 25) Total 150,
 Sessional-Term II –Internal 50, External 50 Viva 50 (Internal 25 + External 25) Total 150,

OBJECTIVES

To enable the students to integrate the concepts of different structural systems in building design. To enable the students to make appropriate choice of structural system and materials to address the design concerns in an integrated manner To introduce students to advanced structural systems, materials and services required in buildings / situations with complexities and special requirements..

Term I

Course Content

1. Industrial roofing systems with details of natural lighting, ventilation, rain water drainage.
2. Design and construction of swimming pools with details of plumbing, underwater lighting, drainage and filtration.
3. Design and construction of auditoriums including details of balcony and acoustical treatment.
4. Introduction to long span structures in steel and concrete and study of their applications in design.

Submissions

1. Drawings to be made for the Topics 1 to 3 above.
2. Topic 4 to be in form of case studies, notes, sketches and market surveys.

Term II

Course Content

1. Construction and design of multi-basements with regards to natural lighting, ventilation, access and fire safety.
2. Construction details of a building / part / feature in a design project.
3. Introduction to high rise structures.
4. Seismic Design.
5. Study of Curtain walls.

Submissions

1. Drawings to be made for the Topics 1 and 2 above.

2. Topic 3 to 5 to be in form of case studies, notes, sketches.

REFERENCE BOOKS :

Elements of Structures by MORGAN
Building Construction by MACKAY WB. Vol. 1 to 4
Construction of Building by BARRY Vol. 1 to 5
Construction Technology by CHUDLEY R. Vol. 1 to 6
Building Construction illustrated by CHING FRANCIS D. K.
Structure and Fabric by EVERET
National Building Code and I.S.I. Specifications
Materials and Finishes by EVERET
A to Z Building Materials in Architecture by HORNBOSTLE

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ELECTIVE I & II (Sessional)

Sr. No	Subject Code	Name of Subject	Head	Teaching Scheme			Examination Scheme			
					Lecture Periods	Studio Periods	Total Periods	Term I Marks	Term II Marks	Total Marks
4a	413426	Elective I & II	SS	Term I	1	2	3	50 + 50	--	100

DESIGN & TECHNOLOGY ELECTIVE

TERM I

Elective I - Design Elective : Sessional Internal 25 External 25 Total 50

Elective II - Technology Elective : Sessional Internal 25 External 25 Total 50

OBJECTIVES

The subject of Electives has been introduced in the syllabus with the specific intention of study of a particular subject of a student's liking in greater detail but in the larger context of overall scope of Architecture syllabus at undergraduate level. This will give students an opportunity to develop their skills in a subject they may opt, to make their career in future. Architectural practice is a team effort in which persons of different skills are required such as concept developers, technical / working drawing experts, specification writers, quantity surveyors, project managers, contract managers, interior designers, architectural photographers, architectural Journalists, signage and graphic designers, energy consultants, building services consultants, marketing managers etc.

The Colleges will have the opportunity to focus upon a particular group of Design and Technology electives depending upon the overall philosophy and mission statement of the College. Individual colleges may offer topics depending upon the availability of experts and resource material.

COURSE OUTLINE : DESIGN ELECTIVE

The probable Design Elective topics are as follows :

1. Industrial and Product Design
2. Interior Landscape Design
3. Set Design
4. Barrier free Environment and Design
5. Arts and Crafts in Architecture
6. Conservation of Heritage Interiors
7. Visual arts and graphics
8. Exhibition Design and display

COURSE OUTLINE: TECHNOLOGY ELECTIVE :

The probable Technology Elective topics are as follows

1. Modular Planning and System Building Construction
2. Innovative Building Technologies
3. Rural (Vernacular) Building technology.
4. Energy Efficient and Eco Friendly Construction and materials
5. Smart and Intelligent Buildings

6. Building Performance Analysis and Appraisal
7. Structure and Form in Architecture.
8. GIS and remote sensing

Detail syllabus for all Elective Topics can be finalized, considering the time and marks allotted to the subject, by individual College in consultation with expert faculty and can be implemented after approval by the board of studies.

SUBMISSION DETAILS :

The students are expected to study the selected topic, including the basic principles, and their application in built projects by undertaking case studies, necessary site visits, and collecting all the relevant information to make it an exhaustive study and present it in a well documented report in standard format.

ELECTIVE III & IV (SESSIONAL)

Sr. No	Subject Code	Name of Subject	Head	Teaching Scheme			Examination Scheme			
					Lecture Periods	Studio Periods	Total Periods	Term I Marks	Term II Marks	Total Marks
4b	413427	Elective III & IV	SS	Term II	1	2	3	--	50 +50	100

TERM II

Elective III- Management Elective : Sessional Internal 25 External 25 Total 50
Elective IV- Allied Elective : Sessional Internal 25 External 25 Total 50

OBJECTIVES

The subject of Electives has been introduced in syllabus with specific intention of study of a particular subject of student's liking in greater detail but in the larger context of overall scope of Architecture syllabus at undergraduate level. This will give students an opportunity to develop their skills in a subject they may opt, to make their career in future.

COURSE OUTLINE MANAGEMENT ELECTIVE

Individual Colleges may offer topics depending upon the availability of experts and resource material. The Colleges will have the opportunity to focus on particular group of topics according to overall philosophy and mission statement of the College.

The probable management elective topics are as follows :

1. Project Management.
2. Energy management.
3. Architectural legalities.
4. Disaster and risk management.
5. Design Management
6. Contract management
7. Facilities management
8. Building Economics

COURSE OUTLINE – ALLIED ELECTIVE

Following is a list of topics from which individual Colleges may offer few topics depending upon the availability of experts and resource material. The Colleges will have the opportunity to focus on particular group of Electives according to the overall philosophy and mission statement of the College. The probable Allied Elective topics are as follows :

1. Architectural Journalism
2. Architectural Photography
3. Applied Psychology in Arch.
4. Applied Sociology in Arch.
5. Urban Design
6. Sustainable Development and Architecture
7. Theory of Architecture
8. Digital Architecture

SUBMISSION DETAILS :

The students are expected to study the selected topic, including the basic principles, and their application in built projects by undertaking case studies, necessary site visits, and collecting all the relevant information to make it an exhaustive study and present it in a well documented report in standard format

INTERIOR DESIGN – THEORY AND PRACTICE A (SESSIONAL) & B (PAPER)

Sr. No	Subject Code	Name of Subject	Head	Teaching Scheme			Examination Scheme		
				Lecture Periods	Studio Periods	Total Periods	Term I Marks	Term II Marks	Total Marks
5a	413445	Interior Design – Theory and Practice a	SS	2	4	6	50	50	100
5b	413446	Interior Design – Theory and Practice b	Theory Paper					100	100

Interior Design – Theory and Practice a :Term I Internal 25 External 25 Total 50
 Term II Internal 25 External 25 Total 50
 Interior Design – Theory and Practice a: Term II Paper 100

OBJECTIVE

- An introduction to the theory of simple and complex Interior and Furniture design and indulge students into the process of design and execution by instruction, demonstration, hands-on exercises as a practical application.
- To sensitize the students by introducing the development of interior and furniture design through various movements, styles and approaches in a wider context.
- To equip the student to communicate effectively the design process and technical aspects, using various mediums of verbal, written, graphic and electronic communication.

TERM 1 :

COURSE OUTLINE

UNIT I : THEORY OF INTERIOR AND FURNITURE DESIGN

1. Elements and principles
2. Study of Ergonomics and it's relation with work efficiency
3. Study of Biomechanics and Comfort Zone wrt environmental factors like noise, temperature, colour ,humidity, light etc

UNIT II : ADVANCE FURNITURE DESIGN

1. Study of System Design Approach and Space planning through furniture
2. Study of Modular and knock down furniture making technology
3. Practical study of Mass production of furniture for various classes of people with the parameters of economy & culture including skills required, materials properties, Bio-mechanical factors and ergonomical considerations, aesthetic considerations and packing, transportation& economical factors considerations.
4. Introduction to parameters of Indoor environment quality wrt to interior finishes and furniture.

SESSIONAL WORK :

- Analysis of furniture forms in a given interior space based on ergonomics, materials, working parameters and visual perception in a sheet format.
- A journal containing the notes and sketches on various theory topics covered in the syllabus.

TERM 2 :

COURSE OUTLINE

UNIT III : HISTORY OF INTERIOR AND FURNITURE DESIGN

1. Comparative study of styles, trends and approaches in interiors with time frame
2. Major Interior/furniture Designers and their work

UNIT IV : INTERIOR AND FURNITURE DESIGN STUDIO

1. Creative workshops through demonstrations by skilled artisans may be conducted to initiate process of design of a form of furniture or interior design feature by handling various materials such as clay, bamboo, ceramic, glass, fabric or metal etc.
2. Design and development of the furniture or interior design feature wrt ergonomics, material properties, working parameters, visual perception and economics.
3. Understanding the technicalities and process involved in making of the same

UNIT V : DESIGN COMMUNICATION

1. Various mediums of communication and their relevance to professional practice.
2. Understanding the client
3. Overall turn out and presentation skills and articulation.
4. Planning and organizing the presentation format
5. Controlling articulation and use of vocabulary
6. Using a story board approach and maintaining a flow
7. Team Bonding and Team coordination.
8. Thinking skills to answer questions. Using tact.

SESSIONAL WORK:

- A journal containing the notes and sketches on various theory topics covered in the unit iii.
- Design development, detail drawings and working model of any one form of furniture under unit iv (preferably to be a part of the Architectural Project scheme of the respective student)
- Material estimation and cost analysis of the same
- Oral Presentation to explain the design and execution process

RECOMMENDED READINGS:

- (1) Private Architectural practice – by Manrice E. Tayler
- (2) Architectural Practice and Procedure – by Hamilton H. Turner.
- (3) Professional Practice in India – by Madhav G. Deobhakta
- (4) Professional Practice – by R. H. Namavati
- (5) Architect's Act 1972
- (6) Council of Architecture and I.I.A. Publications relevant to the 'Course-outline above'.

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TOWN PLANNING (SESSIONAL)

Sr. No	Subject Code	Name of Subject	Head	Teaching Scheme			Examination Scheme			
					Lecture Periods	Studio Periods	Total Periods	Term I Marks	Term II Marks	Total Marks
7a	413447	Town Planning a	SS	Term I	1	2	3	50	-	50

Town Planning : Term I Internal 25 /External 25 Total 50

OBJECTIVE

- To introduce the students to the concepts and theories of planning and the relationship between architectural development and its larger context of the town.
- To introduce the students to planning byelaws which govern the architectural development.

COURSE OUTLINE

TERM I

Unit I: Planners & Theories

- Introduction to the subject of Town Planning, need of study of Town Planning for an architect.
- Introduction to Planning Theories – Theories by various architects

Unit II: Urban Planning in India

- Post Independence development of New Towns and cities in India
- Introduction to Town Planning Schemes, Development Plan and Regional Plan
- UDPFI, Development Control Rules
- Housing – National housing policy, social aspects of housing, economics of housing, types of housing

Unit III: Town Planning Acts & Organisations

- Introduction to types of surveys (Physical, Socio-Economic and Aesthetic Surveys)
- Introduction to Planning Legislation: Municipal Act, M.R. & T.P. Act, Land Acquisition Act, Slum Redevelopment Act, Urban Arts Commission Act, Land Revenue Code.
- Introduction to Local Self Government in urban and rural areas, introduction to 73rd and 74th Amendment of the constitution.

SESSIONAL WORK

- A journal containing the notes on various theory topics covered in the syllabus. Apart from the notes case studies, site visits, study of contemporary issues by article / paper reviews of the topics in the above units should be encouraged and compiled.
- Studies related to the Architectural Design project of the fourth yr. from town planning perspective.

REFERENCE BOOKS :

1. Urban Pattern – Arthur B. Gallion
2. Design of Cities – Edmund Bacon
3. Site Planning – Kevin Lynch
4. Image of the City – Kevin Lynch
5. Town and Country Planning in India – N. K. Gandhi

6. Town Planning – Law, Administration and Professional Practice – G. R. Diwan
7. P.W.D. Handbook of Town Planning
8. Development Plan and Regional Plan Reports
9. Tomorrow – Peaceful Path To Social Reforms – Sir Ebenezer Howard.
10. Basics of Town Planning – J. G. Keskar
11. Townscape – Gordon Cullen
12. Architecture of Town and Cities – Paul D. Spreiregen
13. The New Landscape – Charles Correa
14. Land Acquisition Act of 1894
15. Maharashtra Slum Redevelopment Act
16. Urban Arts Commission Act
17. M.R. & T.P. Act of 1966.

CONTEMPORARY ARCHITECTURE (SESSIONAL)

Sr. No	Subject Code	Name of Subject	Head	Teaching Scheme			Examination Scheme			
					Lecture Periods	Studio Periods	Total Periods	Term I Marks	Term II Marks	Total Marks
7b	413448	Contemporary Arch.	SS	Term II	1	2	3	-	50	50

Term II Internal 25 External 25 Total 50

OBJECTIVES:

Modern architecture is the synthesis of a series of progressive movements since post-industrial period. It is necessary for students to understand these movements, styles, buildings, construction, and contribution of masters in a wider context.

COURSE OUTLINE:

The study includes the progressive developments of the requirements, architectural character and technological advancements of each period / style. The analytical study must include examples and sketches with highlighting the relevant features. The study emphasizes to inculcate the research spirit and awareness of architectural heritage among the students.

TERM II

Socio-political and other influences Philosophies, approaches and purposes Architectural, constructional and other features Contribution of the pioneers

Following movements / schools / styles (3 to 9) to be studied with relevant examples based on the above mentioned points:

1. Industrial Revolution: new materials, methods and requirements
2. Revivalism: Neo-Classic, Neo-Gothic
3. Arts & Crafts Movement
4. Art Nouveau
5. Expressionism
6. Bauhaus
7. De Stijl
8. International Style
9. Post Modernism
10. Colonial architecture in India
11. Post independence architecture in India

RECOMMENDED READINGS:

1. Modern Architecture since 1900 by William Curtis
2. Modern Architecture (Vol. I & II) by Manfredo Tafuri, Francesco Dal Co
3. A History of Western architecture by David Watkin
4. The Story of Western Architecture by Bill Risebero
5. A critical History of Architecture by Kenneth Frampton

SESSIONAL WORK

The Sessional work shall comprise of a hand written journal with notes and sketches of relevant examples on the above mentioned syllabus contents or a drawing documentation / analytical exercise / critical appraisal related to topics mentioned above, prepared individually.

