

SEMESTER-VII														
S.No.	CODE	SUBJECTS	L	TS	PS	CREDITS (L+0.5TS+1.5PS)	MSE		ESE		TA	MAR KS	Course Category	Total Periods
							Theo ry	Viva	Theo ry	Viva				
1	ARPC4111	Architectural Design-VII	3	3	1	6	30	20	0	50	100	200	Professional Core (PC)	7
2	ARPC4112	Urban Design	3	0	0	3	30	0	50	0	20	100	Professional Core (PC)	3
3	AREP4111	Building Materials & Construction Techniques-VII	2	1	1	4	30	20	50	40	60	200	Essential Program Requirements (EPR)	4
4	AREP4112	Sustainable and Energy Efficient Architecture	3	0	0	3	30	0	50	0	20	100	Essential Program Requirements (EPR)	3
5	AREP4113	Housing	3	0	0	3	30	0	50	0	20	100	Essential Program Requirements (EPR)	3
6	AROE4111	Open Elective-II/Online Course/MOOC	3	0	0	3	30	0	50	0	20	100	Open Elective (OE)	3
7	AREP4121	Architectural Journalism	0	2	0	1	0	20	0	40	40	100	Essential Program Requirements (EPR)	2
8	AREP4122	Building Information Modelling	0	2	0	1	0	20	0	40	40	100	Essential Program Requirements (EPR)	2
Total			17	8	2	24						1000		27



DEPARTMENT OF ARCHITECTURE
NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR

G. E. Road, Raipur, 492010 C. G

राष्ट्रीय प्रौद्योगिकी संस्थान रायपुर,

जी. ई. रोड, रायपुर, 492010 छ.ग.

Phone: (0771) 2255475, Fax: (0771) 2254600, Website: www.nitr.ac.in

B.Arch. Syllabus
Semester - VII

1.	Department proposing the course	Architecture
2.	Course Title	Architectural Design-VII
3.	L-T-P Structure	3-3-1
4.	Credits/# of period	6/7
5.	Course number (Code)	ARPC3211
6.	Status (Core/Essential/Elective)	Professional Core (PC)
7.	Pre-requisites (course no./title)	Architectural Design-VI
8.	Frequency of offer	Annual
9.	Course Objectives (CO): 1. To understand various aspects of spatial planning. 2. To learn the concepts of Site development and campus design. 3. To incorporate landscape design in Architectural design process.	
10.	Course Syllabus: All courses learnt in this semester and in all previous semesters are subservient to Architectural Design-VII course. The students shall deal with mixed use of the spaces and multifunctionality of the buildings. The scale of the design shall be at campus level. Students shall be encouraged to deal with large scale projects and site planning strategies. There shall be at least two design problems during this course to achieve the objectives stated hereabove. The suggestive design topics may include multi usage and multiple spaces viz. Institute Campus (Academic/Research/Non-Academic Institutes) multispecialty hospital, office campus, stadium, hotel, resort, township, shopping mall with multiplex, etc. <i>The deliverables shall be in the form of Portfolio/Sheets/Models/Reports/Multi-Media Presentation, etc.</i>	
11.	References: - i. GoI. (2016). <i>National Building Code (NBC)</i> . ii. Neufert, E., Neufert, P., & Kister, J. (2012). <i>Architects' data</i> . John Wiley & Sons. iii. Russ, T. H. (2009). <i>Site planning and design handbook</i> . New York: McGraw-Hill.	



DEPARTMENT OF ARCHITECTURE
NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR

G. E. Road, Raipur, 492010 C. G

राष्ट्रीय प्रौद्योगिकी संस्थान रायपुर,

जी. ई. रोड, रायपुर, 492010 छ.ग.

Phone: (0771) 2255475, Fax: (0771) 2254600, Website: www.nitr.ac.in

B.Arch. Syllabus
Semester - VII

1.	Department proposing the course	Architecture
2.	Course Title	Urban Design
3.	L-T-P Structure	3-0-0
4.	Credits/# of period	3/3
5.	Course number (Code)	ARPC4112
6.	Status (Core/Essential/Elective)	Professional Core (PC)
7.	Pre-requisites (course no./title)	NIL
8.	Frequency of offer	Annual
9.	Course Objectives (CO): 1. To interpret the relationship of Design from buildings to City. 2. To understand and analyze the complex urban fabric.	
10.	Course Syllabus: Unit-1: Introduction to City scale a. Parameters of Urban design. b. Elements of Urban design. c. Place identity and place-making. Unit-2: Visual and Aesthetical Elements a. Patterns and Aesthetical Orders. b. The Kinesthetics Experiences. c. Townscape and its role. Unit-3: Understanding Morphological Elements in Urban Design a. Urban forms and concepts. b. Relationship of Built and Unbuilt. c. Symbolism in Urban form. Unit-4: Social Elements a. Relationship between people and space. b. Public realms and its functions. c. Social concerns related to safety, security, accessibility, inclusion, etc. Unit-5: Functional Elements a. Various tools and analysis techniques. b. Traditional spaces, Heritage and Urban Conservation. c. Case examples and implementation. <i>The assignments may be in form of sketches, term-papers, reports, drawings, presentations, etc.</i>	
11.	References: - i. Alexander, P. i. t. D. o. A. C., Neis, H., Anninou, A., Alexander, C., Mahy, M., King, I. (1987). <i>A new theory of urban design</i> . United Kingdom: Oxford University Press. ii. Cuthbert, A. R. (2011). <i>Understanding Cities: Method in Urban Design</i> . United Kingdom: Routledge. iii. Gallion, A., Eisner, S., Eisner, S. (1993). <i>The Urban Pattern</i> . United States: Wiley. iv. Gehl, J. (2013). <i>Cities for People</i> . United Kingdom: Island Press. v. Graham, W. (2017). <i>Dream Cities: Seven Urban Ideas That Shape the World</i> . United Kingdom: HarperCollins. vi. Jacobs, J. (2016). <i>The Death and Life of Great American Cities</i> . United Kingdom: Random House. vii. Lynch, K. (1960). <i>The Image of the City</i> . Norway: Harvard University Press. viii. Lynch, K. (1984). <i>Good City Form</i> . United Kingdom: MIT Press.	



DEPARTMENT OF ARCHITECTURE
NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR

G. E. Road, Raipur, 492010 C. G

राष्ट्रीय प्रौद्योगिकी संस्थान रायपुर,

जी. ई. रोड, रायपुर, 492010 छ.ग.

Phone: (0771) 2255475, Fax: (0771) 2254600, Website: www.nitr.ac.in

B.Arch. Syllabus
Semester - VII

1.	Department proposing the course	Architecture
2.	Course Title	Building Materials and Construction Techniques-VII
3.	L-T-P Structure	2-1-1
4.	Credits/# of period	4/4
5.	Course number (Code)	AREP4111
6.	Status (Core/Essential/Elective)	Essential Program Requirements (EPR)
7.	Pre-requisites (course no./title)	AREP3211-Building Materials and Construction Techniques-VI
8.	Frequency of offer	Annual
9.	Course Objectives (CO): 1. To acquaint students with the advance building materials and construction techniques. 2. To learn the joinery details for furniture, signages, facades, etc.	
10.	Course Syllabus: Unit-1: Advanced Building Material a. Boards (fiber boards, fireproof/resistant boards, high density fiber boards, etc.). b. Blocks (non- load bearing gypsum, AAC, GRC, GFRC, etc.). c. Composite Panels and Acoustic Materials. d. Stainless Steel. Unit-2: Concrete and Green Building Materials a. Ready-Mix Concrete. b. Lightweight Concrete. c. Green Building Construction Materials. Unit-3: Built-in furniture a. Wardrobe and Cupboard. b. Kitchen cabinet. c. Shelf and Showcases. d. Bookshelf, racks, almirahs, etc. Unit-4: Signages, Partitions and Facades a. Showroom front design, sign board, display board, commercial furniture, glass showcase, counter, etc. b. Partition and screens. Unit-5: Paneling, Cladding and Advance Glazing a. Wall paneling, soundproof construction. b. Advance Curtain Glazing. c. Various interior and exterior surface treatments such as cladding, lining, rendering etc. <i>The assignments may be in form of sketches, term-papers, reports, drawings, presentations, etc.</i>	
11.	References: - i. Barry, R. (1999). <i>The Construction of Buildings Vol. 2. 5th Ed.</i> New Delhi: East-West Press. ii. Foster, J. and Mitchell, S. (1963). <i>Building Construction: Elementary and Advanced, 17th Ed.</i> London: B.T. Batsford Ltd. iii. McKay, W. B. (2005). <i>Building Construction Metric Vol. I-IV. 4th Ed.</i> Mumbai: Orient Longman. iv. Moxley, R. (1961). <i>Mitchell's Elementary Building Construction.</i> London: B. T. Batsford. v. Punmia, B.C. and Jain, A. K. (2016). <i>Building Construction. 11th Ed.</i> New Delhi: Laxmi Publications. vi. Rangwala, S. C. (2017). <i>Engineering Materials: Material Science. 43rd Ed.</i> Anand: Charotar Publishing House Pvt. Ltd. vii. Rangwala, S. C. (2019). <i>Building Construction 33rd Ed.</i> Anand: Charotar Publishing House Pvt. Ltd. viii. Sushil-Kumar, T. B. (2003). <i>Building Construction. 19th Ed.</i> Delhi: Standard Publishers.	



DEPARTMENT OF ARCHITECTURE
NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR

G. E. Road, Raipur, 492010 C. G

राष्ट्रीय प्रौद्योगिकी संस्थान रायपुर,

जी. ई. रोड, रायपुर, 492010 छ.ग.

Phone: (0771) 2255475, Fax: (0771) 2254600, Website: www.nitr.ac.in

B.Arch. Syllabus
Semester - VII

1.	Department proposing the course	Architecture
2.	Course Title	Sustainable and Energy Efficient Architecture
3.	L-T-P Structure	3-0-0
4.	Credits/# of period	3/3
5.	Course number (Code)	AREP4112
6.	Status (Core/Essential/Elective)	Essential Program Requirements (EPR)
7.	Pre-requisites (course no./title)	NIL
8.	Frequency of offer	Annual
9.	Course Objectives (CO): 1. To understand ongoing development of Environmental Protection in building sector. 2. To study various building design strategies for Energy Efficiency and Sustainable Architecture.	
10.	Course Syllabus: Unit-1: Introduction to Sustainability a. Ideas, Issues, and Concepts of Sustainability in Architecture. b. Climate and Shelter. c. Sustainability Measures in Historic and Traditional Buildings. d. Examples from Different Climate Zones. Unit-2: Energy Consumptions and Conservation Practices a. Conventional and Non-Conventional Energy Sources. b. Methods and Assessment of Energy Consumption. c. Energy Conservation Practices. Unit-3: Study of Sustainable Practices a. Solar Passive, Solar Active and Hybrid Techniques. b. Water Management, Landscape, Solid Waste Management, etc. d. Sustainable Materials and Design Guidelines for Different Climatic Zones. Unit-4: Assessment and Analysis a. Control Systems for Energy Efficient Buildings, Illustrative Passive Buildings. b. Integration of Emerging Technologies. c. Computer Packages for Thermal Design of Buildings. d. Computer Packages for Performance Prediction. Unit-5: Analyses for Sustainability and Energy Efficiency a. Building Envelopes. b. Light and Ventilation. c. Thermal Comfort, etc. <i>The assignments may be in form of sketches, term-papers, reports, drawings, presentations, etc.</i>	
11.	References: - i. Bureau of Indian Standards, I.S. 11907 –1986 <i>Recommendations for calculation of Solar Radiation Buildings</i> , 1986. ii. <i>Energy Conservation Building Codes 2017</i> ; Bureau of Energy Efficiency. iii. Givoni, B., "Man, Climate and Architecture", Elsevier, Amsterdam, 1986. 3. Smith, R. J., Phillips, G.M. and Sweeney, M. "Environmental Science", Longman Scientific and Technical, Essex, 1982. iv. J.A. Clarke, <i>Energy Simulation in Building Design (2e)</i> Butterworth 2001. v. J.K. Nayak and J.A. Prajapati <i>Handbook on Energy Conscious Buildings</i> , Solar Energy Control MNES, 2006. vi. J.R. Williams, <i>Passive Solar Heating</i> , Ann Arbor Science, 1983. vii. Koenigsberger, O.H., Ingersoll, T.G., Mayhew Alan and Szokolay, S. V., "Manual of Tropical Housing and Building part 1: Climatic Design", OLBN 0 00212 0011, Orient Longman Limited, 1973. viii. R.W. Jones, J.D. Balcomb, C.E. Kosiewicz, G.S. Lazarus, R.D. McFarland and W.O. Wray, <i>Passive Solar Design Handbook, Vol.3</i> , Report of U.S. Department of Energy (DOE/CS-0127/3), 1982.	



DEPARTMENT OF ARCHITECTURE NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR

G. E. Road, Raipur, 492010 C. G

राष्ट्रीय प्रौद्योगिकी संस्थान रायपुर,

जी. ई. रोड, रायपुर, 492010 छ.ग.

Phone: (0771) 2255475, Fax: (0771) 2254600, Website: www.nitr.ac.in

B.Arch. Syllabus Semester - VII

1.	Department proposing the course	Architecture
2.	Course Title	Housing
3.	L-T-P Structure	3-0-0
4.	Credits/# of period	3/3
5.	Course number (Code)	AREP4113
6.	Status (Core/Essential/Elective)	Essential Program Requirements (EPR)
7.	Pre-requisites (course no./title)	NIL
8.	Frequency of offer	Annual
9.	Course Objectives (CO): 1. To understand basic terminologies used in housing and infrastructure. 2. To understand the dynamics of housing demand and supply. 3. To understand contemporary housing programs and policies.	
10.	Course Syllabus: Unit-1: Introduction a. Definition, Terminologies and understanding of Housing. b. Introduction to Housing Typology and Classification (as per income, ownership, urban form, etc.). c. Physical Infrastructure. d. Social Infrastructure. e. Concept of Cluster and Community Housing. Unit-2: Housing Dynamics a. Housing situation, scenario in Indian and global context. b. Housing Statistics (Housing shortage, demand calculation etc.). c. Factors of Housing Demand and Supply. d. Housing Delivery Mechanism, Core Housing, Community Housing, Site, and Services Schemes etc. Unit-3: Informal Housing a. Informal Housing, Typologies (slums, squatters, etc.), and its Characteristics. b. Concept, Criteria and Determinants of Affordable, Low Income and Informal Housing. c. Housing for Urban Poor. d. Slum Redevelopment Models. Unit-4: Housing Policy a. International Housing Policies (UN Habitat, etc.). b. National and State Housing Policies. c. Legislation and Byelaws related to Housing. d. Government Housing Strategies and Schemes such as RAY, PMAY, IAY etc. Unit-5: Special Housing a. Housing for Singles, Old Aged, Rehabilitation Housing, etc. b. Night Shelters, Emergency Shelters, Service Apartments, Rental Housing, etc. c. Housing Finance and Role of Financial Institutes (NHB, HUDCO, etc.). d. Rural Housing, its Characteristics, and Issues.	
	<i>The assignments may be in form of sketches, term-papers, reports, drawings, presentations, etc.</i>	
11.	References: - i. Bandyopadhyay A. (2010) <i>Textbook of Town Planning</i> , Kolkata, India. ii. De Chiara, J. (1995). <i>Time-saver standards for housing and residential development</i> . McGraw-Hill. iii. Jain, A. K. (2009). <i>Urban Housing and slums</i> . Global Media. iv. Shah, U. C. (2015). <i>Lectures on planning legislation</i> . Suvidha Law house Indore, India. v. Untermann, R. K., & Small, R. (1977). <i>Site planning for cluster housing</i> . Van Nostrand Reinhold Company.	



DEPARTMENT OF ARCHITECTURE
NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR

G. E. Road, Raipur, 492010 C. G

राष्ट्रीय प्रौद्योगिकी संस्थान रायपुर,

जी. ई. रोड, रायपुर, 492010 छ.ग.

Phone: (0771) 2255475, Fax: (0771) 2254600, Website: www.nitr.ac.in

B.Arch. Syllabus
Semester - VII

1.	Department proposing the course	Architecture
2.	Course Title	Intelligent Building
3.	L-T-P Structure	3-0-0
4.	Credits/# of period	3/3
5.	Course number (Code)	AROE4111-1
6.	Status (Core/Essential/Elective)	Open Elective (OE)-1
7.	Pre-requisites (course no./title)	NIL
8.	Frequency of offer	Annual
9.	Course Objectives (CO): 1. To develop orientation to understand advancement in technology contributing to the intelligent buildings concept. 2. To inculcate the ideas of interface and components of building automation controls and techniques in an intelligent building.	
10.	Course Syllabus: Unit-1: Introduction a. Introduction & Origins of the Intelligent Buildings Concept. b. Definition and characteristics of Intelligent Buildings with brief history and contemporary concept. c. Automated buildings. d. Responsive buildings. Unit-2: Facility Management a. Study of Concepts of Management of facilities. b. Importance and study of planning and operational techniques for facility management. c. Various models of Building Intelligence. Unit-3: Services a. Demands on building and services. b. Control systems. c. Study of development of Computer Integrated Building from single function systems to integrated solutions. d. Use of building intelligence in energy management. Unit-4: Key Issues for Intelligent Buildings a. Multiple activity settings. b. Generic analysis of space utilization. c. Models for shared space use. d. The development of briefing process including design activity and building elements, life cycles, Coordination between life cycle, building technologies. e. Study of issues related to site, shell, skin, services, and technology. Unit-5: Intelligent design and construction a. Effective Space utilization. b. Expectations of user, effective communication of architectural concepts to user, Locating people and information. c. Introduction to building efficiency with respect to life cycle costs. <i>The assignments may be in form of sketches, term-papers, reports, drawings, presentations, etc.</i>	
11.	References: - i. Constant, M., & Turnbull, P. (1994). <i>The Principles and Practice of Closed-circuit Television</i> . Paramount Publishing. ii. Eyink, J. (1988). <i>Building automation systems: a practical guide to selection and implementation</i> . BSP.Wayne H.D.; Architecture, Engineering and Environment (2002)	



DEPARTMENT OF ARCHITECTURE
NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR

G. E. Road, Raipur, 492010 C. G

राष्ट्रीय प्रौद्योगिकी संस्थान रायपुर,

जी. ई. रोड, रायपुर, 492010 छ.ग.

Phone: (0771) 2255475, Fax: (0771) 2254600, Website: www.nitr.ac.in

B.Arch. Syllabus
Semester - VII

1.	Department proposing the course	Architecture
2.	Course Title	Modular Coordination
3.	L-T-P Structure	3-0-0
4.	Credits/# of period	3/3
5.	Course number (Code)	AROE4111-2
6.	Status (Core/Essential/Elective)	Open Elective (OE)-II
7.	Pre-requisites (course no./title)	NIL
8.	Frequency of offer	Annual
9.	Course Objectives (CO): 1. To understand the importance of modules and its use. 2. To learn the use of modular co-ordination in building sector.	
10.	Course Syllabus: Unit-1: Introduction to Modular Architecture a. Understanding a Module, its Characteristics, and Standard Sizes. b. Development of Theories of Modular Architecture. c. Advantages and Disadvantages of Modular Architecture. Unit-2: Introduction to Modular Systems a. Modular Method in Building Construction. b. Various Materials used in Modular Architecture. c. Pre-stressed and Post-tensioned Modular Systems. Unit-3: Modular Architecture and Co-ordination a. Basic Principles of Modular Co-ordination. b. Basic Management Policies in Modular Co-ordination. c. Prefabricated Structures: their uses with Examples and Techniques of Constructions. Unit-4: Modular concept as a part of Industrialization a. Effects of Industrialization. b. Industrialized building in India and in Other Countries. c. Use of Latest Construction Techniques in Modular Co-ordination. Unit-5: Application of Modular Architecture and Co-ordination a. Scope and Limitations on Applicability in Various Types of Buildings. b. Case Studies of Modular Buildings in Indian and Worldwide Scenario. c. Application of Modular Co-ordination in Building Design. <i>The assignments may be in form of sketches, term-papers, reports, drawings, presentations, etc.</i>	
11.	References: - i. Adams, M. W., Bradley, P., & American Standards Association. (1946). A62 guide for modular coordination: A guide to assist architects and engineers in applying modular coordination to building plans and details. Boston, Mass: Modular Service Association. ii. Building Materials & Technology Promotion Council, BMTPC Guidelines. iii. IS 7921 (1987): Recommendations for modular co-ordination in building industry: Horizontal co-ordination [CED 51: Planning, Housing and prefabricated construction] iv. National Building Code of India (NBC) (2016). v. Smith, R. E. (2010). Prefab architecture: A guide to modular design and construction. John Wiley & Sons. vi. Staib, G., Dörrhöfer, A., & Rosenthal, M. (2013). Components and systems: Modular construction—Design, structure, new technologies. Walter de Gruyter. vii. United States., & Adams, M. W. (1953). Basic principles of modular coordination: A method of cost reduction in building through standardized dimensions and assembly methods. Washington. viii. Wallance, D.(2021), The Future of Modular Architecture. Routledge.	



DEPARTMENT OF ARCHITECTURE
NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR

G. E. Road, Raipur, 492010 C. G

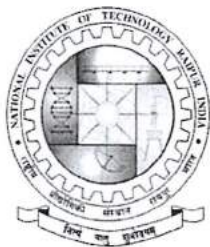
राष्ट्रीय प्रौद्योगिकी संस्थान रायपुर,

जी. ई. रोड, रायपुर, 492010 छ.ग.

Phone: (0771) 2255475, Fax: (0771) 2254600, Website: www.nitr.ac.in

B.Arch. Syllabus
Semester - VII

1.	Department proposing the course	Architecture
2.	Course Title	Alternate Building Materials and Techniques
3.	L-T-P Structure	3-0-0
4.	Credits/# of period	3/3
5.	Course number (Code)	AROE4111-3
6.	Status (Core/Essential/Elective)	Open Elective (OE)-II
7.	Pre-requisites (course no./title)	NIL
8.	Frequency of offer	Annual
9.	Course Objectives (CO): 1. To introduce the concepts of alternative methods of building construction. 2. To acquaint the students with the applicability of non-conventional building materials.	
10.	Course Syllabus: Unit-1: Fiber Reinforced Polymer and Alternate Concrete Based Materials a. Introduction to Fiber based and cement based alternative building materials. b. Types of Fiber based and alternate concrete-based materials (Fiber Reinforced Polymers, Fiber Reinforced Concrete, Polyester Fibers, Carbon Fibers, Ferroconcrete, etc.). c. Best practices and case studies. Unit-2: Bamboo and Plant Based Alternatives a. Introduction (bamboo, hemp-based materials, pine-based materials, etc.). b. Characteristics, advantages and disadvantages, application, and construction techniques. c. Best practices and case studies. Unit-3: Low-Cost Building Materials a. Introduction to low-cost alternatives. b. Various materials, applications, and construction techniques (Ferrocement, Cellular Lightweight Concrete, Fly ash, etc.). d. Best practices and case studies. Unit-4: Recycled Waste Materials a. Introduction to waste as a building material. b. Types and use of waste materials in construction (by-product based, silica fume based, organic waste, inert waste, construction and demolition waste, mineral waste, etc.). c. Best practices and case studies. Unit-5: Latest Innovations and Techniques a. Innovative building materials and technologies. b. Best practices and case studies. <i>The assignments may be in form of sketches, term-papers, reports, drawings, presentations, etc.</i>	
11.	References: - i. Huang, J., & Deringer, J. (2007). Status of energy efficient building codes in Asia. <i>The Asia Business Council. Hong Kong SAR, 2007</i> , 6-9. ii. Jagadish, K. S. (2008). <i>Alternative Building Materials Technology</i> . New Age International. iii. Mackenzie, D. (1991). <i>Design for the Environment</i> . Rizzoli International Publications. iv. Majumdar, M. (2001). <i>Energy Efficient Buildings in India</i> , TERI, New Delhi.	



DEPARTMENT OF ARCHITECTURE
NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR

G. E. Road, Raipur, 492010 C. G

राष्ट्रीय प्रौद्योगिकी संस्थान रायपुर,

जी. ई. रोड, रायपुर, 492010 छ.ग.

Phone: (0771) 2255475, Fax: (0771) 2254600, Website: www.nitr.ac.in

B.Arch. Syllabus
Semester - VII

1.	Department proposing the course	Architecture
2.	Course Title	Architectural Journalism
3.	L-T-P Structure	0-2-0
4.	Credits/# of period	1/2
5.	Course number (Code)	AREP4121
6.	Status (Core/Essential/Elective)	Essential Program Requirements (EPR)
7.	Pre-requisites (course no./title)	NIL
8.	Frequency of offer	Annual
9.	Course Objectives (CO): 1. To equip students with the brief introduction and essentials of architectural writing. 2. To explore the examples of written communication in architecture.	
10.	Course Syllabus: The course will enhance the skill and knowledge about writing on architectural criticism, experiences, narratives, reporting, etc. emphasizing on the role of architectural journalism in architectural practice. Students will get familiarized with the skills of critical appraisal, skills to discourse the ideas and concepts through developing individual writing style in defining architecture and the built environment. The course will provide an overview of the fundamentals of architectural writing, structure, documentation, and techniques. It will also introduce students to criticism in architecture, analysis of historical and contemporary examples. The course will also introduce the photojournalism, media, publishing, laws, and legislation in architectural writing. <i>The deliverables shall be in the form of reports, narratives, presentation, abstract writing, etc.</i>	
11.	References: - i. Dinsmore, G. (1968). <i>Analytical graphics</i> . D. Van Nostrand Co. ii. Friedlander, E., & Lee, J. (2011). <i>Feature writing for newspapers and magazines: the pursuit of excellence</i> . Pearson. iii. King, A. (1976). <i>Architectural journalism and the profession: The early years of George Godwin</i> . <i>Architectural History</i> , 19, 32-53. doi:10.2307/1568388 iv. Lange, A. (2012). <i>Writing About Architecture: Mastering the Language of Buildings and Cities</i> . United States: Princeton Architectural Press. v. Tilden, F., & Craig, R. (2008). <i>Interpreting our heritage</i> . University of North Carolina Press. vi. Wiseman, C. (2014). <i>Writing Architecture: A Practical Guide to Clear Communication about the Built Environment</i> . United States: Trinity University Press.	



DEPARTMENT OF ARCHITECTURE
NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR

G. E. Road, Raipur, 492010 C. G

राष्ट्रीय प्रौद्योगिकी संस्थान रायपुर,

जी. ई. रोड, रायपुर, 492010 छ.ग.

Phone: (0771) 2255475, Fax: (0771) 2254600, Website: www.nitr.ac.in

B.Arch. Syllabus
Semester - VII

1.	Department proposing the course	Architecture
2.	Course Title	Building Information Modelling
3.	L-T-P Structure	0-2-0
4.	Credits/# of period	1/2
5.	Course number (Code)	AREP4122
6.	Status (Core/Essential/Elective)	Essential Program Requirements (EPR)
7.	Pre-requisites (course no./title)	NIL
8.	Frequency of offer	Annual
9.	Course Objectives (CO): 1. To equip the students with the fundamental knowledge and working of Building Information Modeling. 2. To inculcate the knowledge, purpose, and scope of Building Information Modeling in construction industry.	
10.	Course Syllabus: The course will provide an insight about the current construction and management practices of using Building Information Modelling to explore design options and improve on-site collaboration and communication with various stakeholders. This course introduces students to Building Information Modeling using various software like Autodesk Revit, ArchiCAD, etc. The course will guide the students to develop skills in 3D as well as parametric modeling from generic massing through building assemblies and 2D documentation through visual information management and basic design documents. The course will introduce the use of BIM and its effect on professional practice along with emerging BIM related programs and technologies. The lab shall include the introduction to fundamentals of Building Information Modeling, important tools and workflow management, Advanced Modelling, Rendering and material, Building energy simulation, etc. <i>The deliverables shall be in the form of presentation/reports/portfolio of the projects done using the tools and applications introduced in the course.</i>	
11.	References: - i. Eastman, C. M., Liston, K., Sacks, R., Eastman, C., Teicholz, P. (2008). <i>BIM Handbook: A Guide to Building Information Modeling for Owners, Managers, Designers, Engineers and Contractors</i> . United Kingdom: Wiley. ii. Eynon, J. (2016). <i>Construction Manager's BIM Handbook</i> . United Kingdom: Wiley. iii. Holzer, D. (2016). <i>The BIM Manager's Handbook: Guidance for Professionals in Architecture, Engineering, and Construction</i> . Germany: Wiley. iv. Mordue, S., Philp, D., Swaddle, P. (2015). <i>Building Information Modeling for Dummies</i> . Germany: Wiley.	