

Syllabi of Academic Programmes

Tezpur University Entrance Examinations (TUEE) 2017

UG Degree/Diploma/Certificate Programmes

SN.	Programme	Syllabus for Tezpur University Entrance Examinations	School
1.	B.Voc. in Renewable Energy Management	Mathematics, Physics, Chemistry, Biology and General Awareness including English of 10+2 CBSE standards.	Engineering
2.	B.Voc. in Food Processing	The entrance exam will cover the syllabus of CBSE 10+2 Standard. The question paper will comprise of question in equal proportion from five domains of 10+2 CBSE standards viz., (i) Physics (ii) Chemistry (iii) Mathematics (iv) Biology and (v) General Awareness.	
3.	B.Ed.	General Awareness-Current affairs, important facts, politics, education, geography, economics etc. Teaching Aptitude-Teaching-Learning, Teacher's role, Classroom communication etc. Contemporary Issues in Education- Educational scenario of India, Inclusive Education, RTE Act 2009, Education for peace, yoga and gender, Constitutional Provisions, Environmental Education etc. ICT in Education- Online Learning Platforms, Massive Open and Online Courses, classroom communication, teaching learning aids, Educational technology, Web 2.0 Technologies etc. Perspectives in Education-Philosophical, Sociological and Psychological.	Humanities and Social Sciences
4.	Certificate in Chinese	English Grammar - Parts of Speech, Prepositions, Verb forms, Tenses, Genders, Synonyms, Antonyms, Similes, Idioms; General Knowledge on China.	
5.	Integrated B.A. B.Ed. in English	English grammar, composition, comprehension, vocabulary; Common Phrases and Idioms; General Knowledge indicating interest in current affairs, the environment, Indian constitution, history and geography of Northeast India, great personalities, authors, books, prizes (Nobel Prize, Booker Prize, Pulitzer Prize, etc), sports etc.	
6.	Integrated M.A. in English	English grammar, composition, comprehension, vocabulary; Common Phrases and Idioms; General Knowledge indicating interest in current affairs, the environment, Indian constitution, history and geography of Northeast India, great personalities, authors, books, prizes (Nobel Prize, Booker Prize, Pulitzer Prize, etc), sports etc.	
7.	Integrated M.Com.	General Knowledge, Knowledge about Business/Socio Economic Environment, Reasoning, English, Data Interpretation, Arithmetic/ Mathematics.	Management Sciences
8.	Integrated B. Sc. B.Ed. in Chemistry	Basic Concepts of Chemistry, Structure of Atom, Classification of Elements and Periodicity in Properties, Chemical Bonding and Molecular Structure, States of Matter: Gases and Liquids, Chemical Thermodynamics, Equilibrium, Redox Reaction, Hydrogen, s-Block Elements (Alkali and Alkaline Earth Metals), Group 1 and Group 2 Elements, G Preparation and Properties of Some Important Compounds, Some p-Block Elements, Group 13 Elements: Group 14 Elements, Organic Chemistry - Some Basic Principles and Technique, Hydrocarbons, Environmental Chemistry, Solid State Solutions, Electrochemistry, Chemical Kinetics, Surface Chemistry, General Principles and Processes of Isolation of Elements, p - Block Elements, Group 15 Elements, Group 17 Elements, Group 18 Elements, d and f Block Elements, Lanthanoids Actinoids, Coordination Compounds, Haloalkanes and Haloarenes, Alcohols, Phenols and Ethers, Aldehydes, Ketones and Carboxylic Acids, Organic compounds containing Nitrogen, Biomolecules, Polymers, Chemistry in Everyday life.	Sciences
9.	Integrated M.Sc. in Chemistry	Basic Concepts of Chemistry, Structure of Atom, Classification of Elements and Periodicity in Properties, Chemical Bonding and Molecular Structure, States of Matter: Gases and Liquids, Chemical Thermodynamics, Equilibrium, Redox Reaction, Hydrogen, s-Block Elements (Alkali and Alkaline Earth Metals), Group 1 and Group 2 Elements, G Preparation and Properties of Some Important	

		Compounds, Some p-Block Elements, Group 13 Elements: Group 14 Elements, Organic Chemistry - Some Basic Principles and Technique, Hydrocarbons, Environmental Chemistry, Solid State Solutions, Electrochemistry, Chemical Kinetics, Surface Chemistry, General Principles and Processes of Isolation of Elements, p - Block Elements, Group 15 Elements, Group 17 Elements, Group 18 Elements, d and f Block Elements, Lanthanoids Actinoids, Coordination Compounds, Haloalkanes and Haloarenes, Alcohols, Phenols and Ethers, Aldehydes, Ketones and Carboxylic Acids, Organic compounds containing Nitrogen, Biomolecules, Polymers, Chemistry in Everyday life.	
10.	Integrated B.Sc. B.Ed. in Mathematics	Algebra, Trigonometry, Coordinate Geometry, Differential and Integral Calculus, Vectors, Probability and statistics, Linear Programming.	
11.	Integrated M.Sc. in Mathematics	Algebra, Trigonometry, Coordinate Geometry, Differential and Integral Calculus, Vector Algebra, Probability and statistics, Linear Programming.	
12.	Integrated M.Sc. in Bioscience and Bioinformatics	Higher secondary level (SEBA/CBSE/ or equivalent) Physics, Chemistry, Mathematics, basic Computer Science and Biology.	
13.	Integrated B.Sc. B.Ed. in Physics	For Int.M.Sc./B.Sc(B.Ed) Programme: Higher Secondary Syllabus (SEBA/ CBSE/or equivalent).	
14.	Integrated M.Sc. in Physics	For Int.M.Sc./B.Sc(B.Ed) Programme: Higher Secondary Syllabus (SEBA/ CBSE/or equivalent).	

PG Degree/Diploma Programmes

SN	Programme	Syllabus for Tezpur University Entrance Examination	School	
15.	Master of Computer Application	Logical Reasoning, Basic Mathematical Ability, Mathematics (10+2 Level) OR Fundamentals of Computer Science, English Vocabulary and composition.	Engineering	
16.	M.Tech. in Information Technology	Programming in C, Computer Organization, Algorithm and Data Structure, System Programming, Operating Systems, Computer Networks, DBMS, Theory of Computation.		
17.	M.Tech. in Bioelectronics	B.E/B.Tech. level courses in Electronics Engineering, Electrical Engineering, Instrumentation Engineering, Communication Engineering, Biomedical Engineering, Chemical Engineering, Bioengineering, Computer Science and Engineering, Biotechnology, M.Sc. level courses on Chemistry, Biophysics, Molecular Biology, Cell Biology and Molecular Biology and Biotechnology.		
18.	M.Tech. in Electronics Design Technology	B.E. or equivalent level courses on Electronics and Communication Engineering, Electrical Engineering/ AMIE level courses in Electronics/Instrumentation Engineering.		
19.	M.Tech. in Energy Technology	Energy sources and Energy conservation, Mathematics, Physics and Chemistry (Graduate level courses in Science and Engineering).		
20.	M.Tech. in Food Engineering and Technology	Mathematics, General Engineering and Food Engineering and Technology (syllabus for the section of Food Engineering and Technology will be as per the outline of GATE syllabus for Food Technology).		
21.	M.Tech. in Mechanical Engineering	Engineering Mathematics, Solid Mechanics, Theory of Machines, Machine Design, Engineering Materials, Manufacturing Science, Manufacturing Management, Thermodynamics, Fluid Mechanics, IC Engine, Heat Transfer, Power Plant.		
22.	M.A. in Cultural Studies	North East India, History and Culture, Performing Arts, Literature, Current Affairs, Film, Sports, Indian Literature, Indian Culture.		Humanities and Social Sciences
23.	M.A. in Education	Philosophical Perspective in Education- Philosophy and Education, Idealism, Naturalism, Pragmatism, Educational Practices – Kindergarten, Montessori, Dalton Plan, Project Method etc.; Sociological Perspective in Education- Education in relation to Society, Agencies of Socialization, Social Change, Social mobility and stratification etc.; Psychological Perspective in Education- Educational Psychology and Theories, Learning, intelligence, personality, child's growth and development etc.; Educational Technology- Concept and scope of Educational Technology, Educational Communication, Emerging technologies in education- ICT in Education, Technology based learning, MOOCs, SWAYAM, smart classroom etc.; Contemporary Issues in Education- Educational scenario of India, Inclusive Education, RTE Act 2009, Education for peace, yoga and gender, Constitutional Provisions, Environmental Education etc.		
24.	M.A. in English	BA Honours/Major level syllabi taught in Indian universities - Reading Literature (Genres, Movements, Schools, Terms), History of English Literature, English Poetry: Chaucer to Dryden, British Drama: Beginning to Shakespeare, Fiction: Early English Novels, English Poetry : The Augustans and the Romantics, Literary Theory and Criticism, Drama : Jacobean to Eighteenth Century, Fiction : Victorian and Modern, Poetry: Victorian to Modern, The English Essay, English Non-fictional Prose, Drama: Nineteenth and Twentieth Century, English for Communication, Phonetics of English and ELT, Postcolonial Literature. Apart from above, some questions may also be set from English grammar, composition, comprehension, vocabulary, phrases and idioms, current affairs, great authors, books, prizes etc.		
25.	M.A. in Linguistics and Language Technology	Basic grammar (syntax, morphology, phonetics, semantics), language and animal communication, English grammar (+12 level), sociolinguistics, language and society, bilingualism, multilingualism, languages and linguistic situation of Northeast, scheduled languages and non-scheduled languages, language death, language endangerment, language policies and planning.		

26.	M.A. in Linguistics and Endangered Languages	Basic grammar (syntax, morphology, phonetics, semantics), language and animal communication, English grammar (+12 level), sociolinguistics, language and society, bilingualism, multilingualism, languages and linguistic situation of Northeast, scheduled languages and non-scheduled languages, language death, language endangerment, language policies and planning.	
27.	M.A. in Hindi	Hindi Vyakaran, Hindi Bhasha, Hindi Sahitya, Bharatiya Aur Paschatya Kavya-Shastra, Hindi Patrakarita.	
28.	Post Graduate Diploma in Translation (Hindi)	Hindi Vyakaran, Hindi Bhasha, Hindi Sahitya	
29.	M.A. in Mass Communication and Journalism	Current affairs, General knowledge, A basic level of awareness about various aspects of mass media in general at national and international level, English language and grammar.	
30.	M.A. in Communication for Development	Current affairs / General knowledge, A basic level of awareness about various aspects of mass media in general at national and international level, English language and grammar, General idea about developmental issues in the society	
31.	M.A. in Social Work	Current affairs, Logical Reasoning, Awareness on Social welfare schemes, Social Reform movements, Contemporary Social Issues, Rights Based Issues, Quantitative aptitude, Indian Constitution, Basic Concepts in Social Work, Social Legislations, Human Resource Management, English Language Proficiency, Basic Concepts in Social Science (Sociology, Economics, Political Science, Psychology, Research Methods in Social Sciences, Issues in North East India, Environmental and Ecological Issues.	
32.	M.A. in Sociology	Sociology - Concepts and Principles: Definition and Emergence, Basic Concepts, Basic understanding of the works of Marx, Weber, Tonnies, Durkheim, Parsons and Merton, Basic kinship terminologies. Indian Society: Basic Concepts: Caste, Varna, village, region, religion, Processes of Social Change: Sanskritisation, Westernisation, Modernisation, Development and Change, Nation, Nationalism and nation Building. Northeast India: Basic understanding of the Region: Geography, Economy, Polity, Society, Language and Culture, Ethnicity and Identity Politics General Awareness: National and International: Current Affairs, Basic knowledge of culture, politics, geography, history and science, Basic information about the Indian Constitution.	
33.	P.G. Diploma in Child Rights and Governance	Current Affairs Related to Children, Basic Concepts of Human Rights, Laws Related to Children, Basic Concepts in Social Sciences and Social Science Research, Quantitative Aptitude, Organizations Dealing with Children, Proficiency in English.	
34.	P.G. Diploma in Women's Studies	Women and society, woman's in Indian history, women in media, general aptitude, current affairs and computer aptitude.	
35.	Master of Tourism and Travel Management	General Knowledge - Tourism destinations of Northeast India, India and the world; History and mythology of northeast India and India; Current affairs. English - English grammar; Sentence formation. Reasoning	Management Sciences
36.	M.Com	Accounting and Financial Management, Economics, Business Mathematics and Statistics, Banking, Insurance, Taxation, Management, Business Laws, General Business Awareness.	
37.	M.Sc. in Chemistry	Inorganic Chemistry, Quantum Chemistry & Chemical Bonding, Organic Chemistry, Physical Chemistry, Spectroscopy.	Sciences
38.	M.Tech. in Polymer Science and Technology	General syllabus of M.Sc. (Chemistry) of all leading Universities + basic polymer chemistry and basic Chemical Engineering.	
39.	M.Sc. in Environmental Science	Botany, Zoology, Agriculture, Physics, Chemistry, Mathematics, Statistics, Earth and Environmental Science from Undergraduate level curriculum of Indian Universities.	
40.	M.Sc. in Mathematics	Classical Algebra, Differential and Integral Calculus, Co-ordinate Geometry, Vectors, Differential Equations, Mechanics, Real	

		Analysis, Abstract Algebra, Numerical Methods, Probability and Statistics, Linear Algebra, Linear Programming, Topology and Functional Analysis, Number Theory, Complex Analysis.	
41.	M.Sc. in Molecular Biology and Biotechnology	B.Sc. level Life Science (includes Botany, Zoology, Microbiology, Biochemistry, Cell Biology, Physiology, Genetics etc) and higher secondary level Physics, Chemistry and Mathematics.	
42.	M.Sc. in Physics	B.Sc. (Physics major), Chemistry, Mathematics syllabus of any Indian University system.	
43.	M.Sc. in Nanoscience and Technology	B.Sc. (Physics, Chemistry, Mathematics, Biology) syllabus of any Indian University system.	

Ph.D. Programmes

SN	Programme	Department /Centre	Syllabus for Tezpur University Entrance Examination	School	
44.	Ph.D.	Civil Engineering	Soil formation, soil structure. Soil properties, Permeability and seepage, Stress distribution in soils, Compaction, Consolidation, Shear strength, Soil exploration & site investigation, Shallow foundations, Deep Foundations, Ground improvement techniques, Lateral earth pressure, Stability of slope, Introduction to soil dynamics & machine foundation, Liquefaction of soils, Pavement material.	Engineering	
45.	Ph.D.	Computer Science and Engineering	Basics of programming in C, elementary data structures such as - arrays, lists, stacks, queues, trees, recursion; Discrete mathematics, Design and analysis of algorithms, Digital Logic, Computer organization and architecture, Operating systems, Theory of computation, Database management systems, Computer networks and Compiler Design.		
46.	Ph.D.	Electronics and Communication Engineering	Standard P.G./U.G. courses in electronics and communication (ECE) and ECE related PG courses.		
47.	Ph.D.	Energy	P.G./U.G. courses in the respective subjects.		
48.	Ph.D.	Food Engineering and Technology	Syllabus content As per the outline of GATE syllabus for Food Technology.		
49.	Ph.D.	Mechanical Engineering	Engineering Mathematics, Solid Mechanics, Theory of Machines, Machine Design, Engineering Materials, Manufacturing Science, Manufacturing Management, Applied Thermodynamics, Fluid Mechanics, Internal Combustion Engine, Heat Transfer, Power Plant Engineering, Renewable Energy System, Automobile Engineering.		
50.	Ph.D.	Cultural Studies	Cultural Studies as a discipline: its origin and evolution; theoretical legacies of the discipline of Cultural Studies; cultural memory; cultural history of North East India; oral history.		Humanities and Social Sciences
51.	Ph.D.	Education	Research Methodology in Education- Concept of Educational Research, Methods of research, Approaches of research, Hypothesis, Synopsis, Sample-population, Designs of research, Descriptive and inferential statistics, research report, bibliography etc. Contemporary issues in Education- Educational scenario of India, Inclusive Education, RTE Act 2009, and Education for peace, yoga and gender, Constitutional Provisions, Environmental Education etc. Perspectives in Education- Philosophical, Sociological and Psychological foundation of education.		
52.	Ph.D. (ELT)	English and Foreign Languages	English in the global context, ELT in India in historical perspective. Principles and practice of ELT - Language acquisition, language learning-theories, principles; Language skills; Language teaching-different approaches (methods, techniques, procedures); Teaching of literature; Evaluation, testing. Syllabus designing and material production. English for Specific/Academic Purpose.		
	Ph.D. (Linguistics)		Research Methodology, general linguistics, generative linguistics, cognitive linguistics, semantics, morphology, language typology, descriptive linguistics, language endangerment, sociolinguistics and linguistic situation of Northeast.		
	Ph.D. (Literature)		Compulsory: (1) Research Methodology and (2) Literary Theory and Criticism. Apart from above compulsory part, one of the selected		

			<p>specialisation areas:</p> <p>(1) American Literature; (2) Indian Writing in English; (3) New Literatures in English (Postcolonial Literature); (4) Gender and Literature; (5) English Language Teaching.</p>	
53.	Ph.D.	Hindi	Hindi Bhasha evam Sahitya, Hindi Alochana, Hindi Patrakarita, Lok Sahitya, Tulnatmak Sahitya.	
54.	Ph.D.	Mass Communication and Journalism	Various aspects of research methodology for social sciences, Basic concepts of communication and media, A higher level of awareness about various important issues of mass media in general at national and international level.	
55.	Ph.D.	Sociology	<p>Research Methodology: Philosophy, science and research, Theory and field, Social research strategies, Research designs and sample designs, Planning a research project and formulating research questions, reviewing the literature, Ethics in social science research, Nature of quantitative research, Nature of qualitative research, participant observation and ethnography, Triangulation: mixed methods research, Problem of objectivity and subjectivity.</p> <p>Sociological Theory: Classical sociological traditions: Marx, Durkheim, Weber, Approaches to social reality: positivism, hermeneutics, post-structuralism, post-modernism, Functionalism and its critiques, neo-functionalism, Structuralism, social structure as model, structuration, Critical theory and Frankfurt School, Symbolic Interactionism, phenomenology, ethnomethodology, dramaturgy.</p> <p>Indian Society: Theories of Social Change in India, Caste, Varna and Class, Kinship systems, Secularism and Communalism, Nationalism, Nation Building, Regionalism.</p>	
56.	Ph.D.	Business Administration	<p>Basic statistical tools: Measures of Central Tendency, Measures of Dispersion, Correlation, index Numbers, Time series analysis. Basics of Sampling: Sample Vs. Census; Probabilistic Sampling Techniques: Simple Random Sampling, Stratified Random Sampling, Cluster Sampling; Non Probabilistic Sampling Techniques: Convenience Sampling, Judgement Sampling, Quota Sampling and Snowball Sampling. Basics of Hypothesis Testing: Null and alternative hypothesis, Type I error, Type II error. Style of Referencing: American Psychological Association (APA) 6th Edition style.</p> <p>Management By Objectives (MBO), Tows Matrix, Porter's Industry Analysis and Generic Competitive Strategies, Implementation of Strategies, Formal and Informal Organization, Different Forms of Departmentation, Matrix Organization, Strategic Business Unit (SBU), Span of Management, Factors Affecting Centralization & Ecentralization, Delegation, Control Mechanisms, Budgeting, cost of capital, NPV, IRR, Inventory management, CVP analysis, Marginal Costing, Activity Based costing, Determination of foreign Exchange rate, International Monetary System, Fundamental and Technical Analysis, CML, SML, Managed portfolio.</p> <p>Basic concepts of Marketing, Need, Want, Demand, Market, Exchange, Environment Scanning, SWOT Analysis, BCG Matrix, SBUs, Pricing, Promotion-Advertising, Distribution Channel.</p> <p>Basic concept of HRM, Strategic HRM, Functions of</p>	Management Sciences

			HRM, Human Resource Planning, Job Analysis, Training Development, Compensation and its components Performance Appraisal Process and Methods, Industrial Relations. Basics of Tourism, Tourism Destinations, Destination Holiday, Management of Tourist, Destination History, Management of Tourism, Destination Life Cycle, Sustainability, Forums of Tourism.	
57.	Ph.D.	Chemical Sciences	Organic Chemistry, Inorganic Chemistry, Physical and Quantum Chemistry, Polymer Chemistry, Analytical Chemistry, Spectroscopy, Interdisciplinary topics.	Sciences
58.	Ph.D.	Environmental Science	Botany, Zoology, Agriculture, Physics, Chemistry, Mathematics, Statistics, Earth and Environmental Science from master's level curriculum of Indian Universities.	
59.	Ph.D.	Mathematical Sciences	Linear Algebra, Abstract Algebra, Real Analysis, Complex Analysis, Functional Analysis, Topology, Ordinary and Partial Differential Equations, Numerical Analysis, Measure Theory, Classical Mechanics, Probability and Statistics, Mathematical Programming, Number Theory, Special Functions, Integral Equations and Transforms, Calculus of Variation.	
60.	Ph.D.	Molecular Biology and Biotechnology	Master(MSc/MTech)/B.Sc (Graduation) level Life Science (includes Botany, Zoology, Microbiology, Biochemistry, Cell Biology, Physiology, Genetics etc), basic bioinformatics, and Higher secondary level Physics, Chemistry and Mathematics.	
61.	Ph.D.	Physics	M.Sc(Physics, Chemistry, Mathematics, Biology) syllabus of any Indian University system.	