List of New Course(s) Introduced

Department : *Civil Engineering*

Programme Name : *B.Tech.*

Academic Year : 2016-17

List of New Course(s) Introduced

Sr. No.	Course Code	Name of the Course
01.	CE4THS03	ENGINEERING ECONOMICS
02.	CE4TPC03	BUILDING PLANNING & DRAWING
03.	CE4TBS06	NUMERICAL ANALYSIS & COMPUTER APPLICATIONS
04.	CE4LBS03	NUMERICAL ANALYSIS & COMPUTER APPLICATIONS LAB

Minutes of Meetings (MoM) of Board of Studies (BoS)

Academic Year : 2016-17

School : *School of Studies of Engineering and Technology*

Department : *Civil Engineering*

Date and Time : *May 16, 2016 11:00 am*

Venue : *Office chamber of the HOD, Civil Engg.*

DEPARTMENT OF CIVIL ENGINEERING. INSTITUTE OF TECHNOLOGY, GGV

MINUTES OF MEETING

Meeting Of Board of Studies. (notified vide letter NO 69/BOS/Meeting/Civil Engg/2016. Bsp., dtd.12-05-16) of the Department of Civil Engg., IT. GGV has been held today on 16th May at 11:00 AM in the Office chamber of the HOD. Civil Engg. Following members were present in the meeting:

1)	Dr. Shailendra Kumar	Professor & Head. CED. iTGGV	Chairman. BOS
2)	Dr. U. K. Dewangan	Professor& Head. CEO. NIT Raipur	External Subject Expert
3)	Dr. M. Chakradhar Rao	Asso. Professor. CED, JT.GGV	Member
4)	Mr. N. K. Verma	Asst. Professor. CEO. IT.GGV	Member
5)	Dr. Sandeep Singh	Asst. Professor Pure & Applied Mathematics	Special Invitee
6)	Dr. C. P. Dhun	Asst. Professor Pure & Applied Mathematics	Special Invitee
7)	Dr. S. Kispotta	Ass& Professor Department of Economics	Special Invitee

As per the approval of the competent authority, the above special invitee attended the BoS meeting. In the meeting, the course scheme and syllabi as per CBCS B.Tech. ordinance (effective from session 2015-16) was discussed. Letter NO. 50/Acad/2016 dated 10-05-2016 was also placed in the meeting. As per the letter dated 10-05-2016 one member from industry/corporate has to be included in the Board of Studies of the Department. As the new session is to start from July 2016 and this BoS meeting was pre-scheduled for 16/05/2016, the members discussed the scheme and detailed syllabi, proposed for the B.Tech. 2nd year Civil Engg. (III and IV Semesters), as per choice-based credit system (CBCS).

However, the Course scheme and detailed syllabi for B.Tech. V Semester to VIII Semester will be taken up in the next Departmental meeting after inclusion of one member from industry/corporate in the BoS as per the letter no.50/Acad/2016 dated 10-05-2016.

As such, Members recommended and approved the Course scheme and syllabi for B.Tech. Civil Engg. (Ill & IV Semester) to be effective from session 2016-17 and onwards.

The following New courses were introduced in the of B. Tech. 2nd year (III and IV semesters) scheme and syllabi:

- ENGINEERING ECONOMICS (CE4THS03)
- BUILDING PLANNING & DRAWING (CE4TPC03)

- NUMERICAL ANALYSIS & COMPUTER APPLICATIONS (CE4TBS06)
- NUMERICAL ANALYSIS & COMPUTER APPLICATIONS LAB (CE4LBS03)

विभागाध्यक्ष
HOD
सिविल इंजीनियरी विभाग
Department of Civil Engineering
प्रौ.स.गु.घा.विश्वविद्यालय, बिलासपुर (छ.ग.)
I.T., G.G.V. Bilaspur (C.G.)

Signature & Seal of HoD

Scheme and Syllabus

CIVIL ENGG. IT GGV. CBCS

Course Scheme for B.Tech. Civil Engg. IT.,GGV.

(Effective from Session 2016-17 onwards)

III SEMESTER B.TECH. (CIVIL ENGG.)

Sl No	Subject Code	Subjects	Periods /Week			Evaluation Scheme						Grand Total	Credits
						Internal Assessment					ESE		
						Theory			Practical	Total			
		Theory	L[1]	T[2]	P[3]	CT[4]	MSE[4]	TA[5]	LA[7]				
1	CE3TPC01	Fluid Mechanics-I	3	0	0	10	20	10	-	40	60	100	3
2	CE3TES05	Strength of Materials	3	1	0	10	20	10	-	40	60	100	4
3	CE3TBS05	Engineering Mathematics-III	3	0	0	10	20	10	-	40	60	100	3
4	CE3TES06	Building Materials & Construction	3	1	0	10	20	10	-	40	60	100	4
5	CE3TPC02	Surveying-I	3	0	0	10	20	10	-	40	60	100	3
		Practical											
1	CE3LPC01	Surveying-I Lab	0	0	3	-	-	-	30	30	20	50	2
2	CE3LPC02	Fluid Mechanics Lab	0	0	3	-	-	-	30	30	20	50	2
2	CE3LES05	Material Testing Lab	0	0	3	-	-	-	30	30	20	50	2
												Total Credits	23

IV SEMESTER B.TECH. (CIVIL ENGG.)

Sl No	Subject Code	Subjects	Periods /Week			Evaluation Scheme						Grand Total	Credits
						Internal Assessment					ESE		
						Theory			Practical	Total			
		Theory	L[1]	T[2]	P[3]	CT[4]	MSE[4]	TA[5]	LA[7]				
1	CE4THS03	Engineering Economics	3	0	0	10	20	10	-	40	60	100	3
2	CE4TPC03	Building Planning & Drawing	3	0	0	10	20	10	-	40	60	100	3
3	CE4TBS06	Numerical Analysis & Computer Applications	3	0	0	10	20	10	-	40	60	100	3
4	CE4TPC04	Surveying-II	3	0	0	10	20	10	-	40	60	100	3
5	CE4TPC05	Structural Analysis-I	3	1	0	10	20	10	-	40	60	100	4
6	CE4TPC06	Fluid Mechanics-II	3	0	0	10	20	10	-	40	60	100	3
		Practical											
1	CE4LPC03	Civil Engineering Drawing	0	0	3	-	-	-	30	30	20	50	2
2	CE4LPC04	Surveying-II Lab	0	0	3	-	-	-	30	30	20	50	2
3	CE4LBS03	Numerical Analysis & Computer Applications Lab	0	0	3	-	-	-	30	30	20	50	2
												Total Credits	25

[1]-Lecture Hours, [2]-Tutorial Hours, [3]- Practical Hours, [4]- Mid Sem. Exam, [5]-Class Test, [6]-Teacher Assessment (Attendance &Assignments), [7]-Lab Work Assessment

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CIVIL ENGG. IT GGV.

CBCS

SYLLABUS (SEMESTER-IV)
Subject Code: CE4THS03
Subject: Engineering Economics

CREDITS: 3			SESSIONAL - IA				ESE
L	T	P	CT	MSE	TA	TOTAL	
3	-	-	10	20	10	40	60

Unit 1: Basic Concepts and Definitions, Methodology of Economics, Demand and Supply – elasticity,Theory of the Firm and Market Structure, Price and output determinations in different types of market

Unit 2: Public Sector Economics –Welfare economics, Central and commercial marks and their functions, Industrial policies, theory of localization, weber &surgent Florence theory, investment analysis-NPV, ROI, IRR, Payback period, SWOT analysis.

Unit 3: Monetary and Fiscal Policy;Tools, impact on the economy , Inflation, Business Cycle, Cash Flow-2,3,4 Model.

Unit 4: Business Forecasting – Elementary techniques., Cost and Revenue Analysis, Capital Budget, Break Even Analysis.

Unit 5: Indian economy; Urbanization, Unemployment–Poverty, Regional Disparities, Unorganized Sectors-Roll of Plans, Reforms-Post Independent period.

Text/Reference Books:

1. Mankiw Gregory N.(2002), Principles of Economics, Thompson Asia
2. V. Mote, S. Paul, G. Gupta(2004), Managerial Economics, Tata McGraw Hill
3. Misra, S.K. and Puri (2009), Indian Economy, Himalaya
4. PareekSaroj (2003), Textbook of Business Economics, Sunrise Publishers

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CBCS

SYLLABUS (SEMESTER-IV)
Subject Code: CE4TPC03
Subject: Building Planning & Drawing

CREDITS: 3			SESSIONAL - TA				ESE
L	T	P	CT	MSE	TA	TOTAL	
3	-	-	10	20	10	40	60

Part-A (60% weight age)

UNIT – I Principles of building Planning;

UNIT – II BUILDING BYELAWS AND REGULATIONS: Introduction – Terminology – Objectives of building byelaws – Floor Area Ratio (FAR) – Floor Space Index (FSI) – Principles underlying building byelaws – classification of buildings – Open space requirements – built up area limitations – Height of Buildings – Wall thickness – lighting and ventilation requirement. UNIT – III RESIDENTIAL & PUBLIC BUILDINGS: Minimum standards for various parts of residential and public buildings – requirements of different rooms and their grouping – characteristics of various types of residential buildings.

UNIT – IV SIGN CONVENTIONS AND BONDS: Brick, Stone, Plaster, Sand filling, Concrete, Glass, Steel, Cast iron, Copper alloys, Aluminum alloys etc., Lead, Zinc, tin, white lead etc., Earth, Rock, Timber and Marble. English bond & Flemish bond odd & even courses for one, one and half, two and two and half brick walls in thickness at the junction of a corner.

Part-B (40% weight age)

UNIT – V BUILDING DRAWING: Preparation of plan, elevation and section of residential buildings-single storey (load bearing structures), double storey (R.C.C.Framed structure) by using principles of planning and local building bye- laws. For this unit students have to draw the problem on the drawing sheet in the examination.

Text books: 1. Building planning designing and scheduling, (5th Edition) by Gurucharan Singh and Jagadish Sing, Standard Publications Distributers, Delhi, 2010.

2. Building planning and drawing, (3rdedition) by Kumara Swami N., Anand Charotar Publishing House Pvt Ltd, 2010.

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CIVIL ENGG. IT GGV.

CBCS

SYLLABUS (SEMESTER-IV)
Subject Code: CE4TBS06
Subject: Numerical Analysis & Computer Applications

CREDITS: 3			SESSIONAL - IA				ESE
L	T	P	CT	MSE	TA	TOTAL	-
3	0	-	10	20	10	40	60

UNIT – I Approximations and Errors in Computation: Errors and their analysis, Types of errors Curve fitting : Method of Least squares , fitting of a straight line , polynomial fit : Non linear Regression (second degree parabola), Numerical Solution of Algebraic and Transcendental Equations: Secant Method ,Regulafalsi Method, Newton Raphson Method, Solution of a system of simultaneous linear algebraic Equations Direct method: Gauss elimination Method, Gauss Jordan method, Iterative methods .Jacobi Iterative Method, Gauss Seidel Iterative method.

UNIT – II The Calculus of Finite Differences: Finite differences, Difference formula, operators and relation between operators. Inverse Operator, Interpolation with equal intervals: - Newton's forward and backward interpolation formula. Interpolation with Unequal intervals: - Lagrange's interpolation Newton's difference formula, inverse interpolation,

UNIT –III Numerical Differentiation and Integration: - Numerical Differentiation Newton's forward and Backward difference interpolation formula. Maxima and Minima of a Tabulated function, Numerical Integration :- Trapezoidol rule , simpson is (1/3)rd and (3/8) th rule , Boole's rule, weddle rule , Difference Equations -: Definition ,order and degree of a diference equation ., Linear difference equations, Difference equations reducible to Linear form . simultaneous difference equations with constant coefficients

UNIT – IV Numerical solution of ordinary differential equation : Taylor series method , Euler's method, Modified Euler method Runge's method RungeKutta method ,. Numerical solution of partial differential Equations : Classification of P.D.E. of the second order Elliptic equations , solution of Laplace equation , solution of poisson's Equation, solution of elliptic equations by Relaxation method parabolic equations ,

UNIT – V
Programming in ANSI 'C' language: Overview of 'C', Constants, Variables, Data types, Operators and Expression, Decision making and Branching, Decision making and looping, Arrays, Programs in C or C++ language.

Name of Text Books:

1. JAIN & IYNGAR Numerical Methods for Scientific and Engineering Computations.
2. RAO G.S. Numerical Anlysis.
3. Grewal B S Numerical Methods In Engineering and Science.
4. Das K K Advance Engineering Methods.
5. Rajaraman V Computer Oriented Numerical Methods
6. E Balagurusamy-Programming in ANSI 'C'

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CIVIL ENGG. IT GGV.

CBCS

Subject Code: CE4LBS03

Subject: Numerical Analysis & Computer Applications Lab

CREDITS: 2			SESSIONAL - IA			ESE
L	T	P	IA	MSE	TOTAL	
-	-	3	30	-	30	20

Programming based on C or C++ for the numerical methods given in the subject Numerical Analysis & Computer Applications (CE4LBS03)

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