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VEER NARMAD SOUTH GUJARAT UNIVERSITY
University Campus, Udhna-Magdalla Road, SURAT - 395 007, Gujarat, India.
વીર નર્મદ દક્ષિણ ગુજરાત યુનિવર્સિટી
યુનિવર્સિટી કેમ્પસ, ઉધના-મગદલ્લા રોડ, સુરત - ૩૯૫ ૦૦૭, ગુજરાત, ભારત.
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–: પરિપત્ર :–

બી.સી.એ.નો અભ્યાસક્રમ ચલાવતી સંલગ્ન કોલેજોના આચાર્યશ્રીઓને જણાવવાનું કે, **શૈક્ષણિક વર્ષ ૨૦૧૭–૧૮ થી અમલમાં આવનાર B.C.A. 1st & 2nd semester** ના અભ્યાસક્રમ અંગે કોમ્પ્યુટર સાયન્સ વિષયની અભ્યાસસમિતિ અને કોમ્પ્યુટર સાયન્સ એન્ડ ઈન્ફોર્મેશન ટેકનોલોજી વિદ્યાશાખાની સંયુક્ત સભાએ તેની તા.૧૦/૦૪/૨૦૧૭ ની સભાના ઠરાવ ક્રમાંક : ૯ અન્વયે કરેલી નીચેની ભલામણ તેમજ ડીનશ્રીએ તેમના તા. ૨૦/૦૪/૨૦૧૭ ના પત્રથી કરેલ ભલામણ એકેડેમિક કાઉન્સિલે તેની તા. ૨૮/૦૪/૨૦૧૭ ની સભાના ઠરાવ ક્રમાંક : ૨૦૯ અન્વયે મંજૂર કરેલ છે, તેની જાણ સંબંધકર્તા શિક્ષકો અને વિદ્યાર્થીઓને કરવી તદ્ઉપરાંત તેનો અમલ કરવો.

કોમ્પ્યુટર સાયન્સ વિષયની અભ્યાસસમિતિ અને કોમ્પ્યુટર સાયન્સ એન્ડ ઈન્ફોર્મેશન ટેકનોલોજી વિદ્યાશાખાની સંયુક્ત સભાની તા.૧૦/૦૪/૨૦૧૭ ની સભાની ભલામણ ક્રમાંક : ૯

:: આથી ઠરાવવામાં આવે છે કે, શૈક્ષણિક વર્ષ ૨૦૧૭–૧૮ થી અમલમાં આવનાર B.C.A. 1st & 2nd semester ના અભ્યાસક્રમનો સ્વીકાર કરવો. તેમજ B.C.A. Paper 202 Computerized Financial Accounting-CFA જે એકાઉન્ટ ઈન્કલુડીંગ કોસ્ટીંગ વિષયની અભ્યાસસમિતિએ તૈયાર કરેલ છે. તેનો સ્વીકાર કરવો.

ડીનશ્રીના તા. ૨૦/૦૪/૨૦૧૭ ના પત્રની ભલામણ

B.C.A. Paper 202 Computerized Financial Accounting પેપરના ઓપ્શનમાં વધુ એક પેપર બનાવવા નીમેલ પેટાસમિતિએ તૈયાર કરેલ Elective Course : 202-EC-2 નો અભ્યાસક્રમ તેમજ BCA 2nd Sem. નું કોર્ષ વાઈઝ માળખું ફેકલ્ટીવતી સ્વીકારવાની આપેલ સત્તાની રૂએ સ્વીકારી તે મંજૂર કરવા એકેડેમિક કાઉન્સિલને ભલામણ કરવામાં આવે છે.

એકેડેમિક કાઉન્સિલની તા. ૨૮/૦૪/૨૦૧૭ ની સભાનો ઠરાવ ક્રમાંક : ૨૦૯

:: **આથી ઠરાવવામાં આવે છે કે, શૈક્ષણિક વર્ષ ૨૦૧૭–૧૮ થી અમલમાં આવનાર B.C.A. 1st & 2nd semester નો અભ્યાસક્રમ તથા B.C.A. Paper 202 Computerized Financial Accounting પેપરના ઓપ્શનમાં વધુ એક પેપર બનાવવા નીમેલ પેટાસમિતિએ તૈયાર કરેલ Elective Course : 202-EC-2 નો અભ્યાસક્રમ તેમજ BCA 2nd Sem. નું કોર્ષ વાઈઝ માળખું સ્વીકારી તે મંજૂર કરવામાં આવે છે.**

બિડાણ: ઉપર મુજબ

ક્રમાંક : એકે./પરિપત્ર/ ૧૮૫૫ /૧૭
તા. ૦૬-૦૫-૨૦૧૭

ઈ.ચા.કુલસચિવ

પ્રતિ,
૧) બી.સી.એ.નો અભ્યાસક્રમ ચલાવતી સંલગ્ન કોલેજોના આચાર્યશ્રીઓ.
૨) ડીનશ્રી, કોમ્પ્યુટર સાયન્સ એન્ડ ઈન્ફોર્મેશન ટેકનોલોજી વિદ્યાશાખા
૩) પરીક્ષા નિયામકશ્રી, પરીક્ષા વિભાગ, વીર નર્મદ દ. ગુ. યુનિવર્સિટી, સુરત.

VEER NARMAD SOUTH GUJARAT UNIVERSITY – SURAT

Bachelor of Computer Application

Name of Program	Bachelor of Computer Application
Abbreviation	BCA
Duration	3 Years (Regular)
Eligibility	Candidate must have passed standard 12th (H.S.C.) Examination in Science / Commerce stream through Gujarat Higher Secondary Board (G.H.S.E.B.) or any other equivalent board (C.B.S.E. / I.C.S.E.) with English subject. If a candidate has passed H.S.C. Examination from "B" group of science, then he/she is also eligible to get admission.
Objective of the Program	The objective of the program is to open a channel of admission for courses in Computer Science for students who have completed standard 12th (H.S.C.) and are interested in taking computing/IT as a career. The program caters to the needs of the students aspiring to excel in the field of computer science. The program is designed to develop computer professionals versatile in almost all field of computer application. The main emphasis of the course is an applied computer use in various fields.
Program Outcome	It will prepare the aspiring students to become computer programmers who can work in companies at entry level and can also work independently.
Medium of Instruction	English
Program Structure	Semester-wise breakup of the courses is given below:

Semester – I

Course Code	Title	Teaching per Week		Course Credits	University Examination		Internal Marks	Total Marks
		Theory	Practical		Duration	Marks		
101	Communication Skills	2	0	2	3 Hrs.	70	30	100
102	Mathematics	3	0	3	3 Hrs.	70	30	100
103	Introduction to Computers	4	0	4	3 Hrs.	70	30	100
104	Computer Programming & Programming Methodology	4	0	4	3 Hrs.	70	30	100
105	Office Automation Tools	4	0	4	3 Hrs.	70	30	100
106	Practical	0	12	6	5 Hrs.	140	60	200
	Foundation Electives (to be selected from NCC / NSS / Saptadhara)	0	2	2				
Total		17	14	25		490	210	700

For Practical:

1. Batch Size – 30 Maximum
2. In case of more than 10 students in a batch, separate batch should be considered.
3. The journal should be certified by the concerned faculty and also by the Head of the Department,

failing which the student should not be allowed to appear for the External Prac[illegible]ination.

Semester – II

Course Code	Title	Teaching per Week		Course Credits	University Examinatio[illegible]		Total Marks
		Theory	Practical		Duration	M[illegible]	
201	Organization Structure Behaviour	2	0	2	3 Hrs.	[illegible]	100
202	Computcrised Financial Accounting	3	0	3	3 Hrs.	[illegible]	100
203	Operating System – I	4	0	4	3 Hrs.	[illegible]	100
204	Advanced C Programming	4	0	4	3 Hrs.	[illegible]	100
205	Database Management System (DBMS)	4	0	4	3 Hrs.	[illegible]	100
206	Practical	0	12	6	5 Hrs.	1	200
	Foundation Electives (to be selected from NCC / NSS / Saptadhara)	0	2	2			
Total		17	14	25		4	700

For Practical:

4. Batch Size – 30 Maximum
5. In case of more than 10 students in a batch, separate batch should be considere[illegible]
6. The journal should be certified by the concerned faculty and also by the Head [illegible]ment, failing which the student should not be allowed to appear for the External Prac[illegible]ation.

Programming passing rules	As per University rules.

Course 101: Communication Skills

Course Code	101
Course Title	Communication Skills
Credit	2
Teaching per Week	2 Hrs
Minimum weeks per Semester	15 (Including Class work, examination, preparation etc.)
Review / Revision	June 2017
Purpose of Course	Effective communication is vital for the success in various situations. This course will help students develop and improve English Communication skills.
Course Objective	The objective of this course is to guide/help students in improving their English communication skills.
Pre-requisite	Basic School English
Course Out come	After studying this subject, students will be able to improve their communication skills in English.
Course Content	**Unit 1. Introduction** 1.1. Spoken and conversation for Greetings, Requests, Invitation, Permission, Thanks etc. 1.2. Basic Sentence patterns 1.3. Basic rule of Composition 1.4. Vocabulary Development 1.5. Paragraph Development **Unit 2. Fundamentals of Grammar** 2.1. Agreement between Subject and Verb 2.2. Model Auxiliary 2.3. Active and Passive voice 2.4. Conjunction and prepositions **Unit 3. Writing Skills** 3.1. Guidelines for effective writing 3.2. Writing style of application 3.3. Personal Resume **Unit 4. Business Letter and Report Writing Skills** 4.1. Business letter and Memo including Requests, Complaints, Quotation etc. 4.2. Technical Report writing **Unit 5. Speaking and Discussion Skills** 5.1. Components of Effective talk / presentation 5.2. Planning of content of a talk / presentation 5.3. Use of Visual aids 5.4. Effective speaking skills 5.5. Discussion skills
Reference Books	1. Handbook of practical Communication skills – Chrisle W. JAICO 2. Basic Managerial Skills for all – S. J. McGrath - PHI 3. Reading to learn – Sheila Smith & Thomas M. Methuen (London) 4. Communication conversation Practice _ Tata McGraw Hill 5. Communication in English – R. P. Bhatnagar & R. T. Bell – Orient Longman 6. Good English – G. H. Vallins – Rups & Co.

	7. Let's talk English – M. I. Joshi 8. Essentials of Business Communications – Pat Chand
Teaching Methodology	Class Work, Discussion, Self-Study, Seminars an[redacted]ents
Evaluation Method	30% Internal assessment. 70% External assessment.

Course 102: Mathematics

Course Code	102
Course Title	Mathematics
Credit	3
Teaching per Week	3 Hrs
Minimum weeks per Semester	15 (Including Class work, examination, preparation etc.)
Review / Revision	June 2017
Purpose of Course	Purpose of this course is to develop mathematical abilities relevant to Computer Science.
Course Objective	The objective of this course is to guide/help students in developing Mathematical Abilities relevant to Computer Science.
Pre-requisite	School Mathematics
Course Out come	After studying this subject, students will be able to develop Mathematical Abilities relevant to Computer Science.
Course Content	**Unit 1. Set Theory** 1.1. Introduction 1.2. Representation 1.3. Operation and its properties 1.4. Venn Diagram 1.5. Cartesian product and graph **Unit 2. Functions** 2.1. Definition 2.2. Types – Domain and Range 2.3. Construction and functions **Unit 3. Mathematical Logic** 3.1. Introduction to logic 3.2. Truth Table **Unit 4. Boolean Algebra** 4.1 Definition & Examples of Boolean Algebra 4.2 Boolean Functions 4.3 Representation and minimization of Boolean Functions 4.4 Design example using Boolean algebra **Unit 5. Matrices and Determinants** 5.1. Matrices of order M * N 5.2. Row and Column transformation 5.3. Addition, Subtraction and multiplication of Matrices 5.4. Computation of Inverse 5.5. Cramer's Rule 5.6. Business Application of Matrices
Reference Books	1. Co-ordinate Geometry – Shanti Narayan 2. Linear Algebra – Sushoma Verma 3. Advanced Mathematics – B.S. Shah & Co. 4. Schaum's Outline of Boolean algebra and switching circuits – Elliot Mendelson 5. Digital Computer Fundamentals - Tata McGraw Hill, 6th Edition, Thomas C. Bartee 6. Business Mathematics - Qazi Zameeruddin, V. K. Khanna and S. K. Bhambri, Vikas Publishing House Pvt. Ltd.

Teaching Methodology	Class Work, Discussion, Self-Study, Seminars and [redacted]ents
Evaluation Method	30% Internal assessment. 70% External assessment.

Course 103: Introduction to Computers

Course Code	103
Course Title	Introduction to Computers
Credit	4
Teaching per Week	4 Hrs
Minimum weeks per Semester	15 (Including Class work, examination, preparation etc.)
Review / Revision	June 2017
Purpose of Course	A computer is a device that can receive, process and store data. They are used as tools in every part of society together with the Internet. Computers nowadays are complex; there are lot of different components inside them, and they all serve different purposes. They all need to work together for the computer to work; knowing how a computer works makes it easier to use a computer by being able to understand how a computer will respond.
Course Objective	The objective of this course is to provide knowledge of functional units, Number System, devices and memory & its storage.
Pre-requisite	Fundamental Knowledge of Computers
Course Out come	After studying this subject, students will get knowledge of functional units, Number System, devices and memory & its storage.
Course Content	**Unit 1. Introduction** 1.1. History of Development 1.2. Generation of Computers 1.3. Types of Computers-Microcomputers, Minicomputers, Mainframes, Super Computers 1.4. Hardware, Software & Firmware **Unit 2. Basic Computer Architecture** 2.1. Block Diagram & Functional Units 2.2. Various hardware components: Mother board, Processor, Memory, ports 2.3. Phases of Machine cycle 2.3.1.Fetch Cycle 2.3.2.Execution Cycle 2.4. BIOS, POST **Unit 3. Number Systems** 3.1. Various number systems (Binary, Octal, Hexadecimal, Decimal) 3.2. Conversion among various number systems (Consider all possible combinations from one number system to other number system) 3.3. Binary addition & subtraction 3.4. Hexadecimal addition & subtraction 3.5. Parity Scheme 3.6. ASCII Character Code **Unit 4. Memory** 4.1. Memory organization 4.2. Addressing Modes 4.3. Memory types: RAM, ROM, FLASH, PROM, EPROM, EEPROM 4.4. Concepts of virtual memory, Cache memory

	Unit 5. Storage and I/O Devices 5.1. Hard disk and its architecture 5.2. Back up Devices (Optical Disc, USB) 5.3. Floppy Disks, CD-ROM, DVD ROM 5.4. Keyboard, Mouse 5.5. Printers: 5.5.1.Impact: Dot Matrix, Chain, Drum 5.5.2.Non-Impact: Inkjet, Laser 5.6. Plotters, Scanners, OCR, OMR 5.7. Monitors (CRT, Flat Screen LCD)
Reference Books	1. How computer works: Ron White – Tech med 2. Introduction to Computers – Peter Norton 3. Fundamentals of Computers: V. Rajaraman 4. Introduction to Computer Science – Pearson E 5. Computer Fundamentals: Pradeep K. Sinha & BPB)
Teaching Methodology	Class Work, Discussion, Self-Study, Seminars and ents
Evaluation Method	30% Internal assessment; 70% External assessment.

Course 104: Computer Programming & Programming Methodology

Course Code	104
Course Title	Computer Programming & Programming Methodology
Credit	4
Teaching per Week	4 Hrs
Minimum weeks per Semester	15 (Including class work, examination, preparation etc.)
Review / Revision	June 2017
Purpose of Course	Computer programming (often shortened to programming) is a process that leads from an original formulation of a computing problem to executable computer programs. Programming involves activities such as analysis, developing, understanding, generating algorithms, verification of requirements of algorithms including their correctness, and implementation (commonly referred to as coding) of algorithms in a target programming language.
Course Objective	The object of this course is to introduce students the rudiments of computer programming and programming methodology using C language.
Pre-requisite	None
Course outcome	The students will be able to formulate a computing problem to executable computer program using C language.
Course Content	**Unit 1. Introduction** 1.1 Algorithm and Flowchart 1.2 Structured Programming 1.3 Concepts of Compiler, Interpreter, Editor, Debugging & Testing 1.4 Character Set 1.5 Identifiers, Key words, Data types 1.6 Constants and Variables – Needs & Definition **Unit 2. Expression & Operators** 2.1 Operators 2.1.1 Arithmetic Operators 2.1.2 Unary Operators 2.1.3 Relational Operators 2.1.4 Logical Operators 2.1.5 Assignment Operators 2.1.6 Conditional Operator 2.2 Expression 2.2.1 Arithmetic expression 2.2.2 Boolean expression 2.3 Evaluation & Assignment of Expression **Unit 3. Input/Output Statements & Built-in Functions** 3.1. Formatted I/O statements (like *scanf, printf*) 3.2. Unformatted I/O statements (like *getchar(), getch(), getche(), putchar()*) 3.3. Mathematical Functions 3.4. String Functions 3.5. Conversion Functions **Unit 4. Control Statements** 4.1. *if* statement 4.1.1.Simple *if* statement 4.1.2.*if...else* statement

	4.1.3.Nested *if* statement 4.2. *while loop* 4.3. *do...while loop* 4.4. *for loop* 4.5. *break and continue* statements 4.6. *switch* statement **Unit 5. Arrays** 5.1. One Dimensional Arrays 5.2. Sorting using One Dimensional Arrays 5.3. Concept of Two Dimensional Arrays 5.4. String - Array of characters 5.5. String Manipulation.
Reference Books	1. Programming in C, Balaguruswami – TMH 2. C: How to Program, Deitel & Deitel - PHI 3. C Programming Language, Kernigham & Ritchi 4. Programming in C, Stephan Kochan - CBS 5. Mastering Turbo C, Kelly & Bootle - BPB 6. C Language Programming – Byron Gottfried - 7. Let us C, Yashwant Kanetkar - BPB Publicatio 8. Magnifying C, Arpita Gopal - PHI 9. Problem Solving with C, Somashekara - PHI 10. Programming in C, Pradip Dey & Manas Ghos
Teaching Methodology	Class Work, Discussion, Self-Study, Seminars and/ nts
Evaluation Method	30% Internal assessment. 70% External assessment

Course 105: Office Automation Tools

Course Code	105
Course Title	Office Automation Tools
Credit	4
Teaching per Week	4 Hrs
Minimum weeks per Semester	15 (Including class work, examination, preparation etc.)
Review / Revision	June 2017
Purpose of Course	Use of modern office equipment in business or any office is intended to facilitate faster processing and delivery of information, accurate analysis of facts and figures, higher efficiency and productivity, and elimination of fatigue arising from performing repetitive jobs manually. Office Automation Tools help in Word processing, managing Worksheets and preparing Presentations.
Course Objective	The objective of this course is to make students understand and learn various Office Automation Tools like Word processor, Spreadsheet program & Presentation program.
Pre-requisite	Basic Knowledge of Computers
Course outcome	The students will be able to use various Office Automation Tools like Word processor, Spreadsheet software & Presentation software.
Course Content	**Unit 1. Introduction** 1.1. Concept of Windows, Icon, Menu 1.2. Desktop 1.3. Creating Folders and Shortcuts 1.4. Finding Files & Folders 1.5. Creating, Copying, Moving and Deleting files 1.6. Windows Explorer 1.7. Basic DOS Commands **Unit 2. Word Processor** 2.1. Typing, Editing, Proofing & reviewing 2.2. Formatting text & Paragraph 2.3. Automatics Formatting and Styles 2.4. Working with Tables 2.5. Graphics and Frames 2.6. Mail Merge **Unit 3. Spreadsheet Software** 3.1. Concept of worksheet 3.2. Working & Editing in Workbooks 3.3. Creating Formats & Links 3.4. Protecting and Hiding data 3.5. Built in Functions (Mathematical, Statistical, String & Date) 3.6. Formatting a Worksheet 3.7. Creating Charts (Graphics), Formatting and Analysing data 3.8. Organizing Data in a List (Data Management) 3.9. Printing **Unit 4. Presentation Software** 4.1. Creating and Editing Slides 4.2. Creating and Editing objects in the slide 4.3. Animation 4.4. Creating and Running Slide Show 4.5. Templates

	Unit 5. Internet 5.1. Concepts 5.2. Working 5.3. Mailing & surfing tools 5.4. Online Data-Backup
Reference Books.	1. OpenOffice.org For Dummies - Gurdy Leete [redacted] elstein, Mary Leete - Wiley Pub. 2. Beginning OpenOffice 3: From Novice to P [redacted] - Andy Channellle - Apress Pub. 3. The OpenOffice.org 2 Guidebook - Solveig H [redacted] 4. Taming Apache OpenOffice: Getting Started [redacted] Weber - Friends of OpenDocument Inc. 5. Open Office Basic: An Introduction - Jame [redacted] - Gold Turtle Pub. 6. PC Software for Windows 2003 Made Simp [redacted] axali, - TMH 7. 2007 Microsoft Office System Plain & Simpl [redacted] loon, - PHI 8. Internet 6 in 1 – Joe Krayuak & Harbraken, PI [redacted] 9. Introduction to Computer Science-Pearson Edu [redacted] ESL 10. Introduction to Computers-Peter Norton- [redacted] w-Hill Companies
Teaching Methodology	Class Work, Discussion, Self-Study, Seminars and [redacted] nts.
Evaluation Method	30% Internal assessment. 70% External assessment.

Course 106: Practical

Course Code	106
Course Title	Practical
Credit	6
Teaching per Week	12 Hrs
Minimum weeks per Semester	15 (Including Class work, examination, preparation etc.)
Review / Revision	June 2017
Purpose of Course	Through practical implementation the students can understand & learn computer programming in a better way.
Course Objective	The objective of this course is to enable students to Solve Practical Problem in Courses 104 & 105.
Pre-requisite	Basic Programming Skills
Course Out come	After completion of this course, the students will be able to write programs in C language and also will be able to use Office Automation Tools.
Course Content	Practical based on Courses 104 and 105.
Reference Book	As per paper numbers 104 and 105
Teaching Methodology	Lab Work
Evaluation Method	30% Internal assessment. 70% External assessment.

Course 201: Organization Structure & Behaviour

Course Code	201
Course Title	Organization Structure & Behaviour
Credit	2
Teaching per Week	2 Hrs
Minimum weeks per Semester	15 (Including Class work, examination, preparati
Review / Revision	June 2017
Purpose of Course	Computer Science professionals work at diff in the hierarchy of various jobs in IT. So it is essenti and the Organization Structure and behaviour.
Course Objective	The objective of this course is to make stude out the Structure of an Organization and also provide the at leads to better understanding of human behaviour in an
Pre-requisite	Basic Communication Skills
Course Out come	After completion of the course the student will out the Structure of an Organization and also will have bet ding of human behaviour in an organization.
Course Content	**Unit 1. Introduction to Organization and Mana** 1.1. What makes an organization 1.2. Structure of organization 1.3. What is Management 1.4. Scope of Management 1.5. Role of Management 1.6. Manager's Role (Interpersonal Role, In ble and Decisional Role) 1.7. Managerial Skills (Technical Skills Skills, Conceptual Skills) **Unit 2. Attitude** 2.1. Meaning of Attitudes 2.2. Characteristics of Attitudes **Unit 3. Motivation** 3.1. What is motivation? 3.2. Nature and Characteristics of Motivation 3.3. Importance & Benefits of Motivation **Unit 4. Leadership** 4.1. What is Leadership? 4.2. Characteristics of Leadership 4.3. Leadership Styles 4.4. Leadership Skills (Technical Skills, Skills, Conceptual Skills. Personal Skills) **Unit 5. BPO & Call Centre** 5.1. What is B.P.O? 5.2. What is out-sourcing? Benefits of outsour 5.3. What is Call Centre? 5.4. Call Centre setup & functions
Reference Book	1. Management & Organization Development – Abod Rachna Prakashan, New Delhi 2. Organization Behaviour – By Aplewhite Philip ll

	3. Management & Organization Development – By Argyris Chris, McGraw Hill 4. Human Behaviour at work – By Davis Keeth, Tata McGraw Hill 5. Organization Behaviour – By L. M. Prasad. 6. Principles and Practices of Management – By L. M. Prasad. 7. Managing People at work – By Harris O Jeff, John Wiley & Sons Publication 8. Call Centres – By S. Pankaj (APII Publication)
Teaching Methodology	Class Work, Discussion, Self-Study, Seminars and/or Assignments
Evaluation Method	30% Internal assessment. 70% External assessment.

Course 202: Computerized Financial Accounting

Course Code	202
Course Title	Computerized Financial Accounting
Credit	3
Teaching per Week	3 Hrs
Minimum weeks per Semester	15 (Including Class work, examination, preparatio
Review / Revision	June 2017
Purpose of Course	Accounting takes an important role in operating an Every business must keep track of financial informatio to its business activities. This course will help students l basic concepts of Financial Accounting and also under g of a good Financial Accounting software.
Course Objective	The objective of this course is to teach basic co ancial Accounting & use of a good Financial Accounting
Pre-requisite	None
Course Out come	After learning this subject student will be able basic concepts of Financial Accounting & use of ancial Accounting Software.
Course Content	**Unit 1. Introduction to Accounting System** 1.1. Meaning & Definition of Accounting 1.2. Objectives of Accounting 1.3. Concepts and Features of Book Keeping 1.4. Branches of Accounting (Financial Manag 1.5. Basis of Accounting (Accrual Bases, Cash 1.6. Accounting Concepts **Unit 2. Accounting Equation & Transaction Ana** 2.1. Introduction to Assets, Liabilities, Equities 2.2. Concepts of Transaction Analysis 2.3. Classification of Accounts (Real Account, ount, Nominal Account) **Unit 3. Concepts of Book-Keeping** 3.1. Introduction of Single Entry Sy its advantages/disadvantages 3.2. Introduction of Double Entry System and it 3.3. Types of Business Transaction 3.3.1.Cash Transaction 3.3.2.Credit Transaction 3.3.3.Barter Transaction 3.4. Concepts of important Terminologies: tock, Closing Stock, Goods, Inventory, Assets, L pital, Debit, Debtors, Creditors, Income, Expen rofit, Credit, Debit. **Unit 4. Journal & Subsidiary Books (With Prelim les)** 4.1. Meaning of Journal 4.2. Format of Journal 4.3. Concept and format of cash Book 4.4. Concept and format of Petty cash Book 4.5. Concept and format of Purchase, Sale, Pur and Sale Return Book **Unit 5. Concept of Accounting Mechanism**

	5.1. Meaning and Definition of Ledger 5.2. Types of Ledger 5.3. Trial Balance and its objectives
Reference Book	1. Accounting for Management – By Dr. Hawaharlal 2. Financial Management - By Dr. S. N. Maheshwari 3. Accounting for Management – By S. K. Bhattacharya & John Deardon 4. Advanced Accountancy – By S. P. Jain & K. I. Narang 5. Implementing Tally 6.3 – By K. K. Nathani – BPB Publication 6. Implementing Tally 7.2 – By A. K. Nathani & K. K. Nathani BPB Publication
Teaching Methodology	Class Work, Discussion, Self-Study, Seminars and/or Assignments
Evaluation Method	30% Internal assessment. 70% External assessment.

Course 203: Operating System - I

Course Code	203
Course Title	Operating System - I
Credit	4
Teaching per Week	4 Hrs
Minimum weeks per Semester	15 (Including Class work, examination, preparatio
Review / Revision	June 2017
Purpose of Course	An Operating System (OS) is a software that mputer hardware and software resources and provides c ices for computer programs. The operating system is an ponent of the system software in a computer system. A ograms usually require an operating system to function.
Course Objective	The objective of this course is: 1. To make students understand functionalit by an Operating System. 2. To make students aware with basic concepts s O. S. Management. 3. To teach device management to the Students.
Pre-requisite	Basic Knowledge of Programming.
Course Out come	After studying this course, students will be able to what is the role of an OS; how process management, me ement, and file management is performed by the OS. The be able to develop applications that coordinate with the)S in a much better way, which is so essential.
Course Content	**Unit 1. Operating System Concepts** 1.1. Evolution of Operating System & History 1.2. Need of an Operating System 1.3. Single User & Multi User Operating Syst 1.4. Elements of an Operating System 1.5. Operating System as a Resource Mana **Unit 2. Introduction to File System and File Ma** 2.1. File Concept 2.2. Operations on File 2.3. File Access Methods (Sequential Access a ccess) 2.4. Directory Systems File Management Func 2.5. File System and Directory Structure organ 2.6. File Protection. **Unit 3. Introduction of Linux** 3.1. Introduction of Linux versions 3.2. Components of Linux 3.3. Comparison of Windows and Linux **Unit 4. Linux Administration** 4.1. Installing Linux 4.2. Installation of Open Source Software 4.3. Maintaining User Accounts 4.4. System Config Services (Package) **Unit 5. Device Management** 5.1. Device Management Function 5.2. Device Characteristics 5.3. Disk space Management 5.4. Allocation and Disk Scheduling Metho

Reference Books	1. Operating System Concepts: – James Peterson: – McGraw Hill 2. Operating System: – Stallings - PHI 3. Operating System Principles: – Silberschatz, Galvin, Gagne - Willey, India 4. Operating Systems – A. S. Godbole – Tata McGraw Hill 5. Linux – The Complete Reference – Richard Petersen – Tata McGraw Hill
Teaching Methodology	Class Work, Discussion, Self-Study, Seminars and/or Assignments
Evaluation Method	30% Internal assessment. 70% External assessment.

Course 204: Advanced C Programming

Course Code	204
Course Title	Advanced C Programming
Credit	4
Teaching per Week	4 Hrs
Minimum weeks per Semester	15 (Including Class work, examination, preparatio[redacted]
Review / Revision	June 2017
Purpose of Course	Learn the advanced features of C language that w[redacted]ered in earlier semester.
Course Objective	The objective of this course is to introduce to stu[redacted]vanced topics of C language.
Pre-requisite	Fundamental knowledge of computer prograr[redacted]g 'C' language.
Course Out come	The students will be able to develop program usin[redacted]eatures of C.
Course Content	**Unit 1. Pre-processor Directives** 1.1. Macro Definitions (#define, #undef) 1.2. File Inclusion (#include) 1.3. Conditional Compilation (#ifdef, #if[redacted]endif, #else, #elif) **Unit 2. Arrays, Structure & Union** 2.1. Multidimensional Character Array 2.2. Defining Structure 2.3. Processing Structure 2.4. Array of Structure 2.5. Self-Referential Structure 2.6. Defining Union 2.7. Comparison between Structure and Uni[redacted] **Unit 3. User Defined Functions & Pointers** 3.1. User Defined Functions 3.1.1.Definition and Accessing of a Functi[redacted] 3.1.2.Function Prototype 3.1.3.Recursive Function 3.1.4.Call by Value 3.1.5.Passing array to user-defined function[redacted] 3.2. Pointers in C 3.2.1.Pointer Variable Declaration & Mem[redacted] 3.2.2.Address and Value Operators 3.2.3.Pointer Arithmetic 3.2.4.Pointer to Array 3.2.4.1. Pointer to One Dimensional Ar[redacted] 3.2.4.2. Pointer to Multi-Dimensional A[redacted] 3.3. Array of Pointer 3.4. Passing pointers to functions 3.5. Call by Reference 3.6. Structure and Pointer 3.7. Passing structure to a function **Unit 4. File Handling in C** 4.1. Types of Files in C 4.2. Defining, Opening & Closing a File 4.3. Read, Write & Append operations in a File

	4.4. Reading & Writing Records (Structures) to a File 4.5. Random Access of Files 4.5.1.File positions: *ftell()* and *fseek()* 4.5.2.*rewind()* 4.5.3.*fflush()* **Unit 5. Other Features of C** 5.1. Command Line Arguments 5.2. Storage Classes & their use 5.2.1.Automatic Storage Class 5.2.2.Register Storage Class 5.2.3.Static Storage Class 5.2.4.Extern Storage Class 5.3. Enumerated Data Type (*enum*) 5.4. Type Definitions (*typedef*) 5.5. Bitwise Operators 5.5.1.Shift Operators (Right Shift & Left Shift) 5.5.2.The AND Operator & AND Masking 5.5.3.The OR Operator & OR Masking 5.5.4.The XOR Operator & XOR Masking
Reference Books	1. Programming in C, Balaguruswami - TMH 2. C Programming Language, Kernigham & Ritchie - TMH 3. The spirit of C, Cooper H & Mullish H - Jaico Pub. 4. Programming in C, Stephan Kochan - CBS 5. Mastering Turbo C, Kelly & Bootle - BPB 6. C Language Programming, Byron Gottfried -TMH 7. Mastering Turbo C, Stan Kelly – BPB 8. Let us C, Yashwant Kanetkar - BPB Publication 9. Magnifying C, Arpita Gopal - PHI 10. Problem Solving with C, Somashekara - PHI
Teaching Methodology	Class Work, Discussion, Self-Study, Seminars and/or Assignments
Evaluation Method	30% Internal assessment. 70% External assessment.

Course 205: Database Management System (DBMS)

Course Code	205
Course Title	Database Management System (DBMS)
Credit	4
Teaching per Week	4 Hrs
Minimum weeks per Semester	15 (Including Class-work, examination, preparatio
Review / Revision	June 2017
Purpose of Course	Organizations use large amount of data. A Dat gement System (DBMS) is a software tool that makes it p rganize data in a database.
Course Objective	The objective of this course is: 1. To make students understand the basic concept e. 2. To teach students how to create & manag using Structured Query Language (SQL). 3. To teach Normalization and its importance in I
Pre-requisite	Basic Operating Knowledge of Computer and Basi e of Programming.
Course Out come	After studying this, students will get the working k DDL, DML and DCL. The students will be able to p mplete database for their application.
Course Content	**Unit 1. Introduction to Database Systems** 1.1. Drawbacks of Conventional File Processin 1.2. Need of Database Management System 1.3. Organization of database (Physical, Conce al) 1.4. Data Models 1.4.1.Object based data models: E-R Mode 1.4.1.1. E-R Diagram 1.4.1.2. Entities & entity sets 1.4.1.3. Strong & weak entity sets 1.4.1.4. Types of relationships 1.4.2.Record based data models: Networ cal & Relational 1.4.3.Physical data models **Unit 2. Concepts of DBMS** 2.1. Components of Data Base Management Sy 2.1.1.Query Language: DDL, DML, TCL 2.1.2.Database Users: DBA, Programmer, 2.2. Data Independence: Logical & Physical 2.3. Functional Dependencies & Closure tional Dependencies **Unit 3. Types of Keys & Data Integrity** 3.1. Keys: Super Key, Candidate Key, Prima rnate Key, Foreign Key 3.2. Constraints 3.2.1.Domain Integrity 3.2.2.Referential Integrity 3.2.3.Entity Integrity **Unit 4. Normalization** 4.1. Need of Normalization (Consequences of I nsert, Update & Delete Anomalies) 4.2. Normalization

	4.2.1.First Normal Form 4.2.2.Second Normal Form 4.2.3.Third Normal Form 4.2.4.BCNF **Unit 5. Open Office Base** 5.1. Working with databases & tables 5.2. Managing Constraints & Relationships 5.3. Using SQL Queries
Reference Books	1. Database System Concepts: – Henry F. Korth & Abrahim Silberschatz – McGraw Hill Education 2. Introduction to Database Management System– Bipin C. Desai – Galgotia Publication 3. Principles of database systems – Jeffery Ullman – Galgotia Publication 4. An introduction to Database Systems – C. J. Date – Addison Wesley 5. Introduction to database Management – Navin Prakash.-TMH 6. Learn Open Office 3.1 Base – AZIMUTH 7. OpenOffice 3.4 Volume III: Base-Christopher N. Cain, Riley W. Walker-Quantum Scientific Publishing 8. Discovering SQL-A Hands-on Guide for Beginner-Alex Kriegel-Wrox Publication 9. A Conceptual Guide to OpenOffice.org 3-R. Gabriel Gurley (Free E-book)
Teaching Methodology	Class Work, Discussion, Self-Study, Seminars and/or Assignments
Evaluation Method	30% Internal assessment. 70% External assessment.

Course 206: Practical

Course Code	206
Course Title	**Practical**
Credit	6
Teaching per Week	12 Hrs
Minimum weeks per Semester	15 (Including Class work, examination, preparation
Review / Revision	June 2017
Purpose of Course	Give hands on experience of practical problems.
Course Objective	The Objective of this course is to enable stude actical problems in courses 204 & 205.
Pre-requisite	Basic Programming Skills.
Course Out come	After completion of this course, the students wil write programs using advanced features of C langua will understand basic concepts of Database Managemen l build small database applications.
Course Content	Practical based on courses 204 and 205.
Reference Book	As per paper numbers 204 & 205
Teaching Methodology	Lab. Work
Evaluation Method	30% Internal assessment. 70% External assessment.

Syllabus of BCA 1st Year on VNSGU website under commerce faculty of (2016-2017)

VEER NARMAD SOUTH GUJARAT UNIVERSITY SURAT
First Year B.C.A
Course Code 202

Computerized Financial Accounting
(Syllabus effective from Academic Year 2016-17 onwards)

Objectives:

1.To impart basic accounting knowledge as applicable to business.

2.To impart the further knowledge of concepts, theories and principles and their application in the subject of accounting.

Course Outcome: The students will come to know the basic concepts of Accounting

Sr. No.	Course Inputs (As per UGC Model Curriculum)	Weightage
Unit 1	**Introduction to Accounting System** • Meaning and definition of Accounting • Objectives of Accounting • Concepts and Features of Book-Keeping • Branches of Accounting • Basis of Accounting	10 %
Unit 2	**Accounting Concepts (Dual Aspect, Entity Concept, Cost Concept)**	10 %
Unit 3	**Accounting Equation and Transaction Analysis** • Introduction to Assets, Liabilities, Equities • Concepts of Transaction Analysis • Classification of Accounts	20 %
Unit 4	**Concepts of Book-Keeping** • Introduction of Single Entry System and its advantages and dis-advantages • Introduction of Double Entry System and its advantages • Types of Business Transactions • Concepts of Terminologies: Opening Stock, Closing Stock, Goods, Inventory, Assets, Liabilities, Capital, Debtors, Creditors, Income, Expenses, Loss, Profit	10 %
Unit 5	**Journal and Subsidiary Books(Preliminary Examples)** • Journal • Cash Book • Petty Cash Book • Subsidiary Books	20 %
Unit 6	**Concept of Accounting Mechanism** • Meaning of Ledger • Types of Ledgers • Trial Balance	15 %

(34)

Unit 7	**Structure of Balance Sheet** (including structure of a company Balance Sheet as per Company's Act 2013) (Excluding Adjustment) 4. Balance Sheet : Meaning and purpose and it's presentation 5. Form of Balance Sheet. • Horizontal • Vertical 6. Computation of the following from a given Balance Sheet : • Owners' Fund • Reserves and Surplus • Long Term Liabilities • Total Investment as per books of accounts • Long term investment as per books of accounts • Gross current assets (gross and net working capital)

Suggested Readings:

- ✓ Garg, S. *How to use Tally.* Mashbra Industries (p) Ltd.
- ✓ Grewal, T. S., & Gupta, S. C. *Introdution to Accountancy.* S. Chand Limite
- ✓ Gupta, R. L., & Gupta, V. K. *Principles & Practice of Accounting.* Sultan [illegible]s
- ✓ Maheshwari, S. N. *Advanced Accountancy.* Vikas Publishing House Privat
- ✓ Mukharjee, M., & Hanif, A. *Modern Accountancy.* Tata McGraw-Hill [illegible]ompnay Limited.
- ✓ Nadhani, A. K., & Nadhani, K. K. *Accounting With Tally.* Delhi: Bpb Publ
- ✓ Nadhani, A. K., & Nandhani, K. K. *Tally Tutorial.* Delhi: BPB Publication
- ✓ Shukla, M. C., & Grewal, T. S. *Advanced Accounts.* S. Chand & Company

BCA SEMESTER 2								
Course Code	Title	Teaching Per Week		Course Credits	University Examination		Internal Marks	Total Marks
		Theory	Practical		Duration	Marks		
201	Organization Structure Behaviour	2	0	2	3 Hrs	70	30	100
202-EC-1	Computerised Financial Accounting (Elective Paper 1)	3	0	3	3 Hrs	70	30	100
202-EC-2	Emerging Trends and Applications in ICT (Elective Paper 2)	3	0	3	3 Hrs	70	30	100
203	Introduction to Operating System	4	0	4	3 Hrs	70	30	100
204	Advanced C Programming	4	0	4	3 Hrs	70	30	100
205	Database Management System (DBMS)	4	0	4	3 Hrs	70	30	100
206	Practical	0	12	6	5 Hrs	140	60	200
	Foundation Elective (to be selected from NCC / NSS / Saptadhara	0	2	2				
Total		17	14	25		490	210	700

Approved on behalf of Faculty

Course: EC – 2 - 202: **Emerging Trends and Applications in ICT**

Course Code	202(Elective Course Paper)
Course Title	Emerging Trends and Applications in ICT
Credit	3
Teaching per Week	3 Hrs
Minimum weeks per Semester	15 (Including Class work, examination, preparation etc.)
Review / Revision	June 2017
Purpose of Course	Technology changes very frequently. The Information tec and software industry is emerging at very fast pace. Aim o course is to provide 1 fundamental knowledge about emerging trend Information & Communication Technology 2 Study about Designing and implementation co of Application software & their applicability. 3 Students acquire concepts and knowledge abo designing professional and commercial applica softwares.
Course Objective	(i) To Provide fundamental information regarding the em trends of ICT industry. (ii) To provide basic knowledge about emerging trends an related buzz words of ICT Industry. (iii) To provide basic knowledge and glimpses about ready software applications, their design and application areas.
Pre-requisite	None
Course Out come	After learning this subject student will be able to know th concepts of emerging Information Technology and ready s software.
Course Content	**Unit 1. Software Fundamentals** 1.1 What is software? 1.2 Types of software (System and Application Sof 1.3 System software fundamentals 1.4 Application software fundamentals 1.5 Purpose of Application software 1.6 Stand-alone Application software 1.7 Multi-user Application software 1.8 Client-server Architecture Concepts. **Unit 2. Web oriented User Interactive applications** 2.1 What is website 2.2 Purpose of website 2.3 Working of interactive websites 2.4 Various softwares and tools used to develop st and interactive websites 2.5 Working of online transactions **Unit 3.Case Study-1** 3.1 Study of design and applications of popular we

signed on behalf of faculty

	[Purpose of this unit is to show Live demo of various sites and introduce their various features during class room teaching.] 3.1.1 Online product shopping websites : Case study of Amazon, Snapdeal, Flipkart 3.1.2 Online reservation system: Case study of Railway reservation(IRCTC), Bus reservation (GSRCT) 3.1.3 Online Product shopping System: BigBasket, mithai4all 3.1.4 Online transactions processing 3.2 Online payments 3.2.1 Security measures of online payment systems 3.2.2 Payment gateway 3.2.3 Concepts of NEFT, RTGS, IMPS 3.2.4 Online payments systems using Mobile apps like PayTm , BHIM 3.2.5 Online payments process through Credit and Debit Cards **Unit 4. Case Studies of Application Software (Any live system should be shown as case study)** 4.1 Production planning Application software system 4.2 Accounting Application software system 4.3 Inventory Application software system 4.4 Mobile applications 4.4.1 Fundamentals of mobile applications 4.4.2 Concepts of mobile apps and their OS (iOS, Android) 4.4.3 Comparison of mobile OS and stand alone traditional OS 4.4.4 Comparison of mobile apps and web Apps **Unit 5. Emerging Trends in IT** [Purpose of this unit is to give only fundamental knowledge about the terminologies and emerging concepts of these technologies] 5.1 Emerging trends and Buzz words (only Basic Concepts) 5.1.1 Concepts of ERP (Fundamentals and importance) 5.1.2 ETL Concepts: (Extraction, transformation, and loading). 5.1.3 Concepts of data warehousing 5.1.4 Concepts of data science and its application areas 5.1.5 Concepts of data analytics and related tools 5.1.6 Concepts of business analytics 5.1.7 Concepts of cloud

Approved on behalf of faculty

Course: EC – 2 - 202: **Emerging Trends and Applications in ICT**

Reference Book	1. E-Commerce : An Indian Perspective, 3rd Edition PHI 2. Frontiers of of Electronic Commerce Kalakota and Whinstn Addition Wesley 3. Computer Fundamentals: Pradeep K. Sinha & Priti (BPB) 4. Fundamentals of Computers: V. Rajaraman
Teaching Methodology	Class Work, Discussion, Self Study, Seminars and/or Assig
Evaluation Method	30% Internal assessment. 70% External assessment.

BCA SEMESTER 2								
Course Code	Title	Teaching Per Week		Course Credits	University Examination		Internal Marks	Total Marks
		Theory	Practical		Duration	Marks		
201	Organization Structure Behaviour	2	0	2	3 Hrs	70	30	100
202-EC-1	Computerised Financial Accounting (Elective Paper 1)	3	0	3	3 Hrs	70	30	100
202-EC-2	Emerging Trends and Applications in ICT (Elective Paper 2)	3	0	3	3 Hrs	70	30	100
203	Introduction to Operating System	4	0	4	3 Hrs	70	30	100
204	Advanced C Programming	4	0	4	3 Hrs	70	30	100
205	Database Management System (DBMS)	4	0	4	3 Hrs	70	30	100
206	Practical	0	12	6	5 Hrs	140	60	200
	Foundation Elective (to be selected from NCC / NSS / Saptadhara	0	2	2				
Total		17	14	25		490	210	700

Approved on behalf of Faculty

Course: EC – 2 - 202: **Emerging Trends and Applications in ICT**

Course Code	202(Elective Course Paper)
Course Title	Emerging Trends and Applications in ICT
Credit	3
Teaching per Week	3 Hrs
Minimum weeks per Semester	15 (Including Class work, examination, preparation etc.)
Review / Revision	June 2017
Purpose of Course	Technology changes very frequently. The Information tec and software industry is emerging at very fast pace. Aim o course is to provide 1 fundamental knowledge about emerging trend Information & Communication Technology 2 Study about Designing and implementation co of Application software & their applicability. 3 Students acquire concepts and knowledge abo designing professional and commercial applica softwares.
Course Objective	(i) To Provide fundamental information regarding the em trends of ICT industry. (ii) To provide basic knowledge about emerging trends an related buzz words of ICT Industry. (iii) To provide basic knowledge and glimpses about ready software applications, their design and application areas.
Pre-requisite	None
Course Out come	After learning this subject student will be able to know th concepts of emerging Information Technology and ready r software.
Course Content	**Unit 1. Software Fundamentals** 1.1 What is software? 1.2 Types of software (System and Application Sof 1.3 System software fundamentals 1.4 Application software fundamentals 1.5 Purpose of Application software 1.6 Stand-alone Application software 1.7 Multi-user Application software 1.8 Client-server Architecture Concepts. **Unit 2. Web oriented User Interactive applications** 2.1 What is website 2.2 Purpose of website 2.3 Working of interactive websites 2.4 Various softwares and tools used to develop st and interactive websites 2.5 Working of online transactions **Unit 3.Case Study-1** 3.1 Study of design and applications of popular we

issued on behalf of faculty

	[Purpose of this unit is to show Live demo of various sites and introduce their various features during class room teaching.] 3.1.1 Online product shopping websites : Case study of Amazon, Snapdeal, Flipkart 3.1.2 Online reservation system: Case study of Railway reservation(IRCTC), Bus reservation (GSRCT) 3.1.3 Online Product shopping System: BigBasket, mithai4all 3.1.4 Online transactions processing 3.2 Online payments 3.2.1 Security measures of online payment systems 3.2.2 Payment gateway 3.2.3 Concepts of NEFT, RTGS, IMPS 3.2.4 Online payments systems using Mobile apps like PayTm , BHIM 3.2.5 Online payments process through Credit and Debit Cards **Unit 4. Case Studies of Application Software (Any live system should be shown as case study)** 4.1 Production planning Application software system 4.2 Accounting Application software system 4.3 Inventory Application software system 4.4 Mobile applications 4.4.1 Fundamentals of mobile applications 4.4.2 Concepts of mobile apps and their OS (iOS, Android) 4.4.3 Comparison of mobile OS and stand alone traditional OS 4.4.4 Comparison of mobile apps and web Apps **Unit 5. Emerging Trends in IT** [Purpose of this unit is to give only fundamental knowledge about the terminologies and emerging concepts of these technologies] 5.1 Emerging trends and Buzz words (only Basic Concepts) 5.1.1 Concepts of ERP (Fundamentals and importance) 5.1.2 ETL Concepts: (Extraction, transformation, and loading). 5.1.3 Concepts of data warehousing 5.1.4 Concepts of data science and its application areas 5.1.5 Concepts of data analytics and related tools 5.1.6 Concepts of business analytics 5.1.7 Concepts of cloud

Approved on behalf of faculty

Course: EC – 2 - 202: **Emerging Trends and Applications in ICT**

Reference Book	1. E-Commerce : An Indian Perspective, 3rd Edition - PHI 2. Frontiers of of Electronic Commerce Kalakota and Whinstn Addition Wesley 3. Computer Fundamentals: Pradeep K. Sinha & Priti (BPB) 4. Fundamentals of Computers: V. Rajaraman
Teaching Methodology	Class Work, Discussion, Self Study, Seminars and/or Assigr
Evaluation Method	30% Internal assessment. 70% External assessment.