

B.Sc (COMPUTER SCIENCE) (HI)
UNDER GRADUATE COURSE FOR STUDENTS WITH HEARING
IMPAIRMENT
AFFILIATED TO UNIVERSITY OF KERALA

NATIONAL INSTITUTE OF SPEECH & HEARING (NISH)
THIRUVANANTHAPURAM

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A. GENERAL OVERVIEW

The students with hearing impairment (HI) who undergo special school curriculum have no facilities for higher education as there is no special degree program. The HI students who manage to pass the plus two level through mainstream education are also unable to undergo the regular degree program due to their poor language capabilities caused by their handicap. Considering the absence of early interventions, their language skills lag behind those of the regular students and they are ill-equipped to study the regular degree courses which are taught in highly language-oriented-lecture environment. The HI students require a degree curriculum which is taught in an environment where alternate methods of teaching are employed and also the curriculum has to have extra emphasis on language development, especially written and expressive English. This calls for a special scheme, syllabus and assessment. However, the curriculum has to ensure that the core subject content remains the same and the degree level skill acquisition is ensured for the student.

Despite this very obvious need for specially tailored curriculum with additional language training and instruction methods, no successful programs have been conceived or implemented so far in India. The facilities provided by all agencies were aimed at helping them undergo regular curriculum which they are unable to pursue. This observation is based on the experience gained by teaching post secondary diploma and degree courses at the National Institute of Speech & Hearing.

The Degree Course in Computer Science for Hearing Impaired students started in 2008 is an attempt to provide higher education facilities to hearing impaired students. The course provides

- Appropriate teaching environment
- Special scheme and syllabus
- Modified evaluation techniques
- Job oriented curriculum
- Computer aided teaching methods

The scheme of the course was prepared and implemented in 2008. Two batches of students have graduated based on the original modified curriculum. Extensive reviews by experts and faculty have resulted in recommending revisions to the

curriculum so as to improve the knowledge acquisition at-par with the regular hearing students, as the students undergo the degree program.

The language and mathematical skills of the HI students seeking admission to the degree course are at a very dismal level. A HI student who attends degree classes will find it very difficult to understand concepts and also write exams. The first step to rectify this defect is the addition of 2 preparatory semesters before the student is introduced to the core degree program. This period is to build a reasonably strong foundation in English language and basic mathematics and become competent to undergo the degree course. The preparatory semesters should build a foundation in the **three R's of education** – reading, writing and arithmetic. Once this foundation is built, the student will find it easier to assimilate subject content and the teaching faculty will find it easier to teach technical concepts.

Since the HI students lack a first language in the verbal mode, the knowledge of sign language will help them to understand concepts and also give them the ability to communicate with each other. Currently HI students use gestures and locally developed sign languages to communicate and the vocabulary of these local signs and gestures is limited. A standardized exposure to Indian Sign Language (ISL) will help them to be able to communicate more meaningfully. The students will be able to understand the teachers who use ISL to communicate in class. Hence the preparatory program contains courses in ISL.

Additionally through the degree curriculum there is a need to provide English language training and hence the modified curriculum will have additional courses in English language comprehension, grammar and writing.

The course will have equal emphasis on lecture sessions and lab. sessions to help the students have more practice time that will help them to assimilate the knowledge more easily.

B. REGULATIONS

1. Eligibility for Admission

- a. Candidates seeking admission to the B.Sc. (Computer Science) (HI) should have passed the **Plus Two / Pre degree or its equivalent** from any Board or University in India, recognized as equivalent for admission to a degree course in the University of Kerala.
- b. Admission is restricted to the *Hearing Impaired*, as defined in 'The Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act 1995.' (Copy attached). Hearing Impairment means loss of 60dB or more in the better ear in the conversational range of frequencies.

2. Mode of Selection

Selection of eligible candidates shall be made on the basis of the marks obtained in the Aptitude test conducted by the Institute.

3. Strength and Reservation of seats

Number of seats for the course shall be 30.

Reservation for SC/ST shall be as per rules for admission followed by the University of Kerala from time to time. No other reservations shall be given.

4. Duration and structure of the Course

The course span shall be *four academic years* consisting of eight semesters. Each academic year shall be divided into two semesters.

The first two semesters shall be **Preparatory Semesters**. Only candidates who secure a pass in the Preparatory Semesters shall be eligible to register for the third semester. A candidate should pass the Preparatory Semesters in a maximum of two successive attempts failing which the candidate will be required to discontinue the course. However, the performance in the Preparatory Semesters shall not be considered in the final grading of the candidates for the issue of Degree.

Each semester shall comprise of approximately 20 weeks of not less than 90 working days.

5. Course work

Each student shall pursue the course as is enclosed in the scheme of study.

6. Scheme of Evaluation

6.1. General Details.

The candidates shall be evaluated continuously through each semester. The evaluation for a subject shall involve – (1) Internal Assessment (IA) and (2) End Semester Examination (ESE). The final marks for each subject shall be calculated with the following weights:

Internal Assessment	:	25%
End Semester Examination	:	75%

6.1.1. Internal Assessment (IA)

A maximum of three Internal Assessments, each comprising of a quiz, assignment and test paper, shall be conducted in each semester. The best two marks (IA) from the three shall be considered. Internal assessment marks shall be computed based on following:

❖ Quiz	:	40% weightage
❖ Assignment	:	20% weightage
❖ Test paper	:	40% weightage

For practical subjects, mini project/lab record shall be considered as an Assignment for internal assessment

6.1.2. End Semester examination (ESE)

The examinations for the Preparatory Semesters, namely the first and second semesters, shall be conducted by the Head of the Institute/Principal of the college. The marks obtained in the Preparatory semesters shall in no way be considered for the final grading of students for the issue of degree.

End Semester examinations for the odd Semesters, namely the third, fifth and seventh semesters shall be conducted by the Head of the Institute/Principal of the college. The marks secured by the candidate in the End Semester examination conducted by the Head of the Institute/Principal of the college shall be forwarded to the University by the Head of the Institute/ Principal of the college and shall be recorded in the consolidated mark list issued to the candidate on completion of the course.

For the even semesters i.e.; the fourth, sixth and eighth semesters, the University of Kerala shall conduct the End Semester examination.

6.2. Syllabus for Examinations

For each End Semester examination only the syllabus of the current semester shall be followed.

6.3. Submission of record books for practical examinations

Candidates appearing for practical examinations should submit bonafide Record Books prescribed for practical examinations, duly certified by the Head of the Department. Otherwise the candidates will not be permitted to appear for the practical examinations.

6.4. Criteria to Graduate from Course

6.4.1. Minimum Marks

A candidate will be declared to have passed the examination for each Semester if he/she secures for each subject in the Semester,

- i) a minimum of 40% in the End Semester Examination (ESE), and
- ii) a minimum of 50% for Internal Assessment (IA) and End semester examination (ESE) put together.

6.4.2. Failure and Supplementary Examination

If a student fails in one or more papers, he/she need re-appear only for the failed paper(s). He/she shall reappear for this in the examination conducted for the next subsequent batch(es) of students.

A candidate should pass all the papers of a particular semester in a maximum of three successive attempts failing which the candidate will be required to discontinue the course.

7. Requirements for Degree

7.1 Issue of Degree

The University of Kerala shall award the **BSc (Computer Science) (HI)** degree on successful completion of the requirements of the course.

7.2 Discontinuation of Course

If a candidate does not pass all the subjects prescribed in the scheme of study within 6 consecutive years after enrolment for the course, the candidate shall discontinue the course.

7.3 Classification of successful candidates

Aggregate of the marks secured in all the semesters, excluding the Preparatory semesters (the first and second semesters), shall be considered for final classification of results for award of the degree.

- i) Candidates who secure 80% or above in aggregate of the six semesters, i.e. third to eighth semesters, having passed all subjects at the first appearance and within the minimum duration of the course shall be declared to have passed the course in 'first class with distinction'.
- ii) Candidates securing 60% or above but less than 80% in the aggregate of the six semesters, i.e. third to eighth semesters, having passed all subjects at the first appearance and within the minimum duration of the course shall be declared to have passed the course in 'first class'.
- iii) All other successful candidates securing less than 60% in the aggregate of all subjects in the six semesters, i.e. third to eighth semesters, shall be declared to have passed in 'second class'.

7.4 Award of ranks

Ranks shall be awarded on the basis of the total marks secured in the six semesters from the third to the eighth.

Candidates who fail in one or more subjects during the course shall not be eligible for the award of ranks.

The candidates should have completed the course within the prescribed (minimum) number of years.

8. Project Work

The eighth semester shall include a project work that will involve the individual effort of the student to complete an assigned task under the guidance of a faculty member. This project should provide exposure to current industry best-practices. Evaluation of the Project work shall be done by a common board of examiners consisting of two members one of whom shall be the concerned guide or the Head of the Department of the Institute and the other an examiner appointed by the University.

9. Minimum Attendance & Provision to Condone

Each candidate shall be permitted to register and appear for the End Semester examination only if the candidate has 80% attendance in theory as well as lab sessions in all subjects in that particular semester. Failure to meet the criteria will disqualify the candidate from attending the End Semester examination of the respective semester. The candidate shall have to repeat the semester, that is both theory and lab shall have to be repeated in toto.

Leave of absence shall be granted only on medical grounds. However, such leave shall be considered only for the purpose of granting condonation of shortage of attendance. Condonation shall be done by the University as per rules for other BSc courses.

10. Cancellation of Examinations

A student can cancel all the papers of any semester on the basis of the existing rules for cancellation as that for other B.Sc. courses.

C. SCHEME

Overview

The curriculum and syllabus for the B.Sc. Computer Science for HI is prepared to suit the special needs of the hearing impaired. The hearing impairment results in significant language deficiency for the student. Some of the major issues of hearing impaired students which need to be addressed while preparing a syllabus for them include their:

- Poor language level
- Poor Writing, reading and comprehension skills, and
- Providing stress free education

This necessitates a preparatory program to lay reasonably strong foundation in comprehension as well as written and expressive English language. Further enhancement will have to be provided through additional courses in English throughout the curriculum. Not only suitable curriculum content but also appropriate method of content delivery is called for. Hence the normal syllabus has been adapted in full consideration of the unique needs of the hearing impaired to ensure effective degree education for the HI student.

The course aims at providing skills for meaningful employment in industry or government. It is felt that a few general subjects included in the normal degree curriculum are not particularly required for their future job career. Therefore, only such subjects that are essential have been included in the curriculum. The major bulk of the papers are those related to the subject. The scheme gives more time and exposure to subjects which are of definite ultimate use in their future career. Also extra lab hours are provided in the course curriculum to complement the lecture hours.

The detailed scheme and syllabus of the Course is included below. The curriculum consists of theory and lab in computer application areas, with more stress on lab sessions. The curriculum includes introductory level courses in Mathematics and English. Communicative English is taught throughout the seven semesters to improve their command of English to benefit them in their professional career. The remaining periods are entirely allotted for subject study. Beginning with C programming the course takes the students to the latest fields in computer programming like C# and .net, scripting etc.

Curriculum delivery

Innovative teaching techniques will be used in view of the severe communication problems in delivering content to the hearing impaired students. Teaching in class rooms shall be through sign language, speech, writing, lip reading and gestures. Use of visual media, mainly computers, will also be extensively used as an effective teaching aid. Computer aided Teaching learning materials (CA TLM) shall be developed for the different subjects included in the syllabus. They will offer a supportive environment for the special education needs of the hearing impaired. The main features of the CA-TLM packages are exposition of concepts through visuals and animation, highly interactive learning methods and inbuilt self evaluation programmes. TLMs will help the hearing impaired in concept development and aid them in repeatedly learning the lessons at their own pace.

Assessment and evaluation

Special consideration has to be given to the mode of evaluation. Parts of the questions shall be multiple choice or one word questions with emphasis on testing comprehension. Special consideration shall be given to the issue that these students are used to refer text books or reference books mentioned in the syllabus. However, the foundation course is expected to improve this situation. Special notes prepared by specialists for each subject of the special program shall also be considered as reference notes. Short answer questions shall be preferred to essay type questions that test the comprehension of the subject matter.

BSc (Computer Science) (HI)

SCHEME

Preparatory Year: Semester I

Total Marks 600

Code	Subject	Assignment				Tests			ESE	Pass %	Max. MARK
		I	II	III	IV	I	II	III			
101	English Comprehension	25	25	25	25	25	25	25	25	40	200
102	English Writing & Grammar I	25	25	25	25	25	25	25	25	40	200
103	Elementary Mathematics I	25	25	25	25	25	25	25	25	40	200
104	Sign Language I	AUDIT									

Preparatory Year: Semester II

Total Marks 600

Code	Subject	Assignment				Tests			ESE	Pass %	Max. MARK
		I	II	III	IV	I	II	III			
201	Business English	25	25	25	25	25	25	25	25	40	200
202	English & Writing Grammar II	25	25	25	25	25	25	25	25	40	200
203	Elementary Mathematics II	25	25	25	25	25	25	25	25	40	200
204	Sign Language II	AUDIT									

Semester III

Total Marks 600

Subject Code and Name	IA Max.	ESE Max.	ESE Min. Pass	Total Marks	Min. Pass
301 Communicative English I	25	75	30	100	50
302 Mathematics I	25	75	30	100	50
303 Computer Fundamentals	25	75	30	100	50
304 Introduction to Operating System	25	75	30	100	50
305 Internet Technologies and Web Programming using HTML	25	75	30	100	50
306 Internet Technologies and Web Programming using HTML - Lab	25	75	30	100	50

Semester IV

Total Marks 600

Subject Code and Name	IA Max.	ESE Max.	ESE Min. Pass	Total Marks	Min. Pass
401 Communicative English II	25	75	30	100	50
402 Mathematics II	25	75	30	100	50
403 Digital Electronics	25	75	30	100	50
404 Programming in C	25	75	30	100	50
405 Programming Lab	25	75	30	100	50
406 PC Software I Lab	25	75	30	100	50

Semester V

Total Marks 600

Subject Code and Name	IA Max.	ESE Max.	ESE Min. Pass	Total Marks	Min. Pass
501 Communicative English III	25	75	30	100	50
502 Object Oriented Programming Using C++	25	75	30	100	50
503 Operating System	25	75	30	100	50
504 PC Software II Lab	25	75	30	100	50
505 OOP Lab	25	75	30	100	50
506 OS Lab	25	75	30	100	50

Semester VI

Total Marks 600

Subject Code and Name	IA Max.	ESE Max.	ESE Min. Pass	Total Marks	Min. Pass
601 Communicative English IV	25	75	30	100	50
602 RDBMS	25	75	30	100	50
603 .NET Programming	25	75	30	100	50
604 RDBMS Lab	25	75	30	100	50
605 .NET Programming Lab	25	75	30	100	50
606 Computer Graphics I - Lab	25	75	30	100	50

Semester VII

Total Marks 600

Subject Code and Name	IA Max.	ESE Max.	ESE Min. Pass	Total Marks	Min. Pass
701 Communicative English V	25	75	30	100	50
702 JAVA Programming	25	75	30	100	50
703 Computer Networks	25	75	30	100	50
704 JAVA Programming - Lab	25	75	30	100	50
705 Elective Lab	25	75	30	100	50
706 Computer Graphics II Lab	25	75	30	100	50

Semester VIII

Total Marks 600

Subject Code and Name	In-sem Max	End-sem Max	End-sem min	Total	Min. Pass
801 Software Documentation and Testing	25	75	30	100	50
802 Software Testing Lab	25	75	30	100	50
803 Project	100	300	120	400	200

D. SYLLABUS DETAILS

Preparatory Year: Semester I and II

OBJECTIVE:

Hearing impaired students have very great difficulty learning language. Second language acquisition is rendered extremely difficult because HI students often do not have a first language.

This course is designed to help HI students reach a level of competence in English that will enable them to cope with the second language requirements for a degree course at any University.

Duration : Two semesters

Each semester shall have 90 working days and 325 hours of classroom instruction and guided activity, besides other allotted work.

Preparatory Year: Semester I

Total Marks 600

Code	Subject	Assignment				Tests			ESE	Pass %	Max. MARK
		I	II	III	IV	I	II	III			
101	English Comprehension	25	25	25	25	25	25	25	25	40	200
102	English Writing & Grammar I	25	25	25	25	25	25	25	25	40	200
103	Elementary Mathematics I	25	25	25	25	25	25	25	25	40	200
104	Sign Language I	AUDIT									

101 ENGLISH COMPREHENSION

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OBJECTIVE:

To teach students the basic building blocks of English.

Module I: Letters, words, basic vocabulary building

Module II: Simple reading: comprehension passages, magazines, newspaper reading, digest, stories, articles etc

102 ENGLISH WRITING AND GRAMMAR I

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Module I: Simple writing related with reading activities, paragraph writing, letter writing, make sentences, answering questions from passage etc.

Module II: Basic Grammar: Introduction to parts of speech, short module lessons on vocabulary and prose lessons.

NOTE: Hearing impaired students who seek admission to the degree course have often been exempted from studying English up till their 10th class. Moreover they have very poor recall of language already learned. Hence it is essential that the basics of language be taught and reinforced so that students internalise them. This will involve an enormous amount of repetition and reinforcement.

ASSESSMENT:

Three class tests and an end semester examination. Each test and end semester examination will be for 25 marks. Course work and continuous assessment through assignments will be for 25 marks in each module.

TEXTBOOK:

'Cambridge Express: English for Schools: Students Book 1'. (Only the prose lessons are included.)

103 - ELEMENTARY MATHEMATICS I

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OBJECTIVE:

Specific objectives of the course are:

(a) to give an understanding of important mathematical concepts such as Fundamental operations, LCM, HCF, average, Theory of numbers, Arithmetic mean, Geometric mean, mensuration etc and to introduce students to mathematical techniques which are relevant to the real world;

(b) to enhance those mathematical skills required for further studies in *mathematics*.

Module I:

Theory of numbers, Review of fundamental operations, exponentiation, Prime numbers, Factorisation, Arithmetic mean, Geometric mean, Compound interest, Simple Interest, Percentage, LCM, HCF, Unit and dimension, Average, complex numbers, separation into real and imaginary parts.

Module II:

Unitary method- time and distance, time and work, weights and measures, money, conversions, percentages, applications to simple and compound interest, profit and loss, ratio and proportion, variation.

ASSESSMENT:

There will be continuous assessment after each module. Internal assessment exams will be conducted for 25 marks and end semester exam for 25 marks.

104 – SIGN LANGUAGE I

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1. AIM:

To promote the use of Indian Sign Language since ISL is the medium of communication through which literature and subject matter is taught.

2. OBJECTIVES:

1. To acquire signs for a basic functional vocabulary of 400+ words.
2. To learn 100-150 conversational sentences including statements, questions and instructions.
3. Basic communicative competence in Indian sign language.

3. SYLLABUS:

Module I:

Basic functional vocabulary, Simple sentences, Greetings, Describing people and objects,

Pronouns, Family relationships, Common objects(clothing, household etc), Plants

Module II:

Question with question words, Interrogatives, Places, People, Professions, Actions, Numbers, and Time.

Module III:

Negative sentences & commands, Negative responses to offers /suggestions, Dialogue construction in different situations, Opposites, Finger spelling.

Module IV:

Story narration, Text, Colours, Calendar (week/month/year), Food (vegetables, fruits, Beverages, etc), Animals.

4. REFERENCES:

Ramakrishna Mission Vidyalaya(2001): The Indian Sign Language Dictionary

Zeshan, Ulrike(2001): Workbook for the Basic course in Indian Sign Language(Level A)

Zeshan, Ulrike(2002): Workbook for the Advanced course in Indian Sign Language(Level B)

Zeshan, Ulrike(forthcoming): Workbook for the Professional course in Indian Sign Language(Level C)

MadanVasishta, James Woodward & Susan deSantis:(1950): An Introduction to Indian sign Language(Focus on Delhi). New Delhi: All India Federation Of The Deaf.

Video Materials:

Zeshan, Ulrike(2001): Workbook for the Basic course in Indian Sign Language(Level A)

Zeshan, Ulrike(2002): Workbook for the Advanced course in Indian Sign Language(Level B)

Zeshan, Ulrike(forthcoming): Workbook for the Professional course in Indian Sign Language(Level C)

Internet resources

www.indiansignlanguage.org

www.deafsigns.org

5. NOTE ON CURRICULAR TRANSACTIONS:

Hearing impaired children have very special educational needs. In many ways they require qualitatively different services from the hearing children, such as specific communication methods and teaching techniques, and a special curriculum for the purpose of development of concepts and a sound language foundation. Hearing children begin school with a well developed oral language system which is used as the medium for their instruction and which is the basis for development of reading and writing skills. As against this, for most deaf children, a primary overriding goal is to develop the basic language skills before they begin their formal academic education.

6. NOTE ON ASSESSMENT:

Since ISL cannot be written or spoken, assessment is to be done through activity. There are three criteria by which the students should be assessed.

1. Knowledge
2. Accuracy
3. Fluency

The assessment should be done in 3 levels. The first level will include testing of functional vocabulary, simple statement/questions, and negative sentences. The students will have to sign a story and participate in a dialogue wherein the situation will be provided, in the second level. In the third level, the students will have to sign a written paragraph.

Preparatory Year: Semester II

Total Marks 600

Code	Subject	Assignment				Tests			ESE	Pass %	Max. MARK
		I	II	III	IV	I	II	III			
201	Business English	25	25	25	25	25	25	25	25	40	200
202	English & Writing Grammar II	25	25	25	25	25	25	25	25	40	200
203	Elementary Mathematics II	25	25	25	25	25	25	25	25	40	200
204	Sign Language II	AUDIT									

201 – BUSINESS ENGLISH

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OBJECTIVE:

1. Ensure that the students have internalised the basics.
2. To read, understand and write simple English.

Module I: Words/ phrases related to business/office environment, greetings, introductions.

Making enquiries, conveying information, bidding good bye.

Module II: Formal Writing

Composing notes/memos, Composing formal letters.

202 ENGLISH WRITING AND GRAMMAR

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Module I: Introduction to phrases, clauses, sentences and grammar in detail.

Detailed writing: Letter writing, paragraph writing, answering questions, report writing etc.

Module II: Detailed reading from newspaper, magazines, comprehension passages, stories, articles, digest etc.

Short module lessons on complex vocabulary and prose lessons.

ASSESSMENT:

Three class tests and an end semester examination. Each test and end semester examination will be for 25 marks.

Course work and continuous assessment through assignments will be for 25 marks in each module.

TEXTBOOK:

'Cambridge Express: English for Schools: Students Book 2'. (Only the prose lessons are included.)

203 - ELEMENTARY MATHEMATICS II

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OBJECTIVE:

Specific objectives of the course are:

(a) to give an understanding of important mathematical ideas such as Fundamental operations, LCM, HCF, average , Theory of numbers, Arithmetic mean, Geometric mean, mensuration etc and to introduce students to mathematical techniques which are relevant to the real world;

(b) to enhance those mathematical skills required for further studies in *mathematics*.

Module I:

Quadratic equations, solving problems based on quadratic equations, Ratio and proportion, Basics of Accounting: Expenditure and Assets, credit and debit, profit and loss, balance sheet.

Module II:

Measurement - Areas of squares, rectangles, parallelograms, triangle and circle. Surface area and volume of cuboids, lateral surface and volume of right circular cones and cylinders, surface area and volume of spheres. Combination of Shapes

ASSESSMENT:

There will be continuous assessment after each module. Internal assessment exams will be conducted for 25 marks and ends semester exam 25 marks.

204 – SIGN LANGUAGE II

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1. AIM:

To promote the use of Indian Sign Language since ISL is the medium of communication through which literature and subject matter can be taught.

2. OBJECTIVES:

- To acquire signs and become fluent in sign usage.
- To develop a standard signing among the students
- To reinforce the signs learnt in subject code 104
- Basic communicative competence in Indian sign language.

3. SYLLABUS:

The basics learnt in 104 shall be revised and more communication activities shall be practiced.

4. REFERENCES:

Ramakrishna Mission Vidyalaya(2001): The Indian Sign Language Dictionary
Zeshan, Ulrike(2001): Workbook for the Basic course in Indian Sign Language(Level A)
Zeshan, Ulrike(2002): Workbook for the Advanced course in Indian Sign Language(Level B)
Zeshan, Ulrike(forthcoming): Workbook for the Professional course in Indian Sign Language(Level C)
MadanVasishtha, James Woodward & Susan deSantis: (1950): An Introduction to Indian sign Language(Focus on Delhi). New Delhi: All India Federation Of The Deaf.

Video Materials:

Zeshan, Ulrike(2001): Workbook for the Basic course in Indian Sign Language(Level A)
Zeshan, Ulrike(2002): Workbook for the Advanced course in Indian Sign Language(Level B)
Zeshan, Ulrike(forthcoming): Workbook for the Professional course in Indian Sign Language(Level C)

Internet resources

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5. NOTE ON CURRICULAR TRANSACTIONS:

Hearing impaired children have very special educational needs. In many ways they require qualitatively different services from the hearing children, such as specific communication methods and teaching techniques, and a special curriculum for the purpose of development of concepts and a sound language foundation. Hearing children begin school with a well developed oral language system which is used as the medium for their instruction and which is the basis for development of reading and writing skills. As against this, for most deaf children, a primary overriding goal is to develop the basic language skills before they begin their formal academic education.

6. NOTE ON ASSESSMENT:

Since ISL cannot be written or spoken, assessment is to be done through activity. There are three criteria by which the students should be assessed.

4. Knowledge
5. Accuracy
6. Fluency

The assessment should be done in 3 levels. The first level will include testing of functional vocabulary, simple statement/questions, and negative sentences. The students will have to sign a story and participate in a dialogue wherein the situation will be provided, in the second level. In the third level, the students will have to sign a written paragraph.

Semester III

Total Marks 600

Subject Code and Name	IA Max.	ESE Max.	ESE Min. Pass	Total Marks	Min. Pass
301 Communicative English I	25	75	30	100	50
302 Mathematics I	25	75	30	100	50
303 Computer Fundamentals	25	75	30	100	50
304 Operating System I	25	75	30	100	50
305 Internet Technologies and Web Programming using HTML	25	75	30	100	50
306 Internet Technologies and Web Programming using HTML - Lab	25	75	30	100	50

301 - COMMUNICATIVE ENGLISH I

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1. AIM:

- 1) To build a basic vocabulary of a minimum 500 words.
- 2) To teach basic grammatical structures.
- 3) **To enhance the student's ability to read and write the English used in daily life.**
- 4) To familiarize students to write in academic, social and work related situations

2. OBJECTIVES:

On completion of this course, the students should be able to

- Understand the use of English in everyday life.
- Respond to communication in English in different contexts.

3. SYLLABUS:

Module I:

Vocabulary building (Professions, Common things, Relations, Furniture, Food, Things on the road, Flowers, Technical terms, Ornaments, Garments, Colours, Animals, Birds, Vehicles, Trees, Fruits, Musical instruments, Insects, Body parts, Dishes, Aquatic animals, etc); Numerals (Roman letters, number names, figures etc); Calendar.

The SENTENCE: Subject and Predicate; Parts of Speech – NOUN

Module II:

Prose : 1 Chapter, NOUNS: Types and Use

Singular and plural; Use of This, That, These, Those etc, Gender – Types

Articles; PRONOUNS (Basics)

Module III:

Prose : 1 Chapter, VERBS: Main and Auxiliary verbs

Tenses: Simple and continuous form of present, past and future

ADJECTIVES: Types and Uses

ADVERBS: Types and Uses

PREPOSITIONS: General rules regarding usage, prepositions used with certain adjectives and nouns.

PUNCTUATIONS : (BASICS 1)

Module IV:

CONJUNCTIONS: joining words and sentences.

Comprehension passages, Letter Writing - Personal and Formal

SENTENCE: Definition, Sentence construction patterns, SVO and SV (Intransitive). Arranging sentences in order

4. REFERENCES

4.1 Core Reference

Raymond Murphy, Essential Grammar in use (2nd Edition), ISBN-13 978-0-521
Cambridge Uni press 133393-7

Raymond Murphy, Essential Grammar in use (3rd Edition) , ISBN-13 978-0-521
Cambridge Uni press 133393-7

Wren and Martin, High school English Grammar and Composition

S.Chand and Company Ltd. ISBN: 81-219-2197-X Rs: 215

4.2 Additional References

Improve your child's grammar level (1-5) Martin Gilmartin Cescent News (K.L)
SDN.BHD

IELTS & TOEFL Made Easy; George John, B-Ghud

4.3 Internet Resources

www.englishpage.com

www.englishgrammar101.com

www.ego4u.com

www.usingenglish.com

www.grammarbook.com

www.learn4good.com

www.englishclub.com

5. NOTE ON CURRICULAR TRANSACTION:

Language teaching to hearing children is based on pedagogies reliant on speaking and listening. It is fruitless to use such techniques with HI children. These facts have shaped our choice of materials, our teaching methodologies and our methods of testing. Even our aims and objectives are different for the differently abled. The syllabus, the materials chosen and teaching and testing methods all reflect this. An appreciation of this essential difference is imperative to the success of any attempt to frame a syllabus for hearing-impaired children. We can use special communication methods like Sign language, Gestures, lip reading, speech, writing etc. Innovative teaching techniques shall be used in view of the

severe communication problems of the students with hearing impairment. Use of visual media, mainly computers, smart boards shall also be extensively used as an effective teaching aid.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- i) A Quiz with 40% weightage,
- ii) An Assignment with 20% weightage and
- iii) A Test paper with 40% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be of mostly of multiple choice type.

6.1.2. Assignment

The assignment should consist of carefully chosen activities where students can refer internet or the notes given. All assignments should be preceded by assessment guidelines and submission policy. It should contain sufficient guidelines on the effort expected from the students.

6.1.3. Test

Special consideration is to be given even to the mode of written examination. Considering the students' inadequate language ability due to their particular handicap, there is no meaning in testing their writing skills. Essay type questions shall be avoided. Instead more problems for working out shall be given. More of multiple choice questions and fill up the blank type questions has to be given. The special lecture notes prepared according to the syllabus by experts should be used as reference. This could be of the same pattern as the End Semester question paper.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration.

Sample Questions

I. Underline the Nouns in the following sentences

The cat killed the rat.

Our class consists of twenty students.

The teacher is teaching grammar.

The elephant has great strength.

Jawaharlal Nehru was the first Prime Minister of India.

II. Fill in the blanks with a or an or the as may be suitable

a) Copper is.....useful metal.

b) He is not honorable man.

c) Do you seeblue sky?

d) Varanasi is.....city.

e) Sun shines brightly.

III. Pick out all the adjectives in the following sentences.

a) Every dog has his day.

b) Abdul won the second prize.

c) I ate some rice.

d) The hand has five fingers.

e) He was absent last week.

IV. Read the following passage and answer the questions given below.

Once there lived an honest gentle man. He had a wife who was a very good woman. They had a daughter. This girl was a sweetest child. She was called **Cinderella**. **After some time Cinderella's mother died. Then her father married for a second time. The second wife was a proud and wicked woman. She had two girls. They were selfish and wicked like their mother. They made Cinderella do all the hard works in the house. Cinderella's father was ruled by his second wife. So he did not complain to him.**

a)What kind of a man was Cinderella's father?

b) What sort of a woman was his first wife?

c) Why did he marry for a second time?

d) How did the second wife treat Cinderella?

302 - MATHEMATICS I

=====

1. AIM:

To explore the Fundamental Concepts of Mathematics.

2. OBJECTIVES:

Specific objectives of the course are:

- (a) To give an understanding of important mathematical concepts such as Fundamental operations, Sets, Integration, Differentiation, Trigonometry, Graphs, Functions and Limits, Analytical Geometry, Statistics etc, and to introduce students to mathematical techniques which are relevant to the real world;
- (b) To enhance those mathematical skills required for further studies in *Mathematics*.

3. SYLLABUS:

Module I:

Mensuration - Area of squares, rectangles, parallelograms, triangle and circle. Surface area and volume of cuboids, lateral surface and volume of right circular cones and cylinders, surface area and volume of spheres.

Module II:

Matrices: Matrix definitions, special type of matrices, addition, subtraction and multiplication of matrices. Properties of addition, subtraction and multiplication, transpose of a matrix, symmetric matrices and skew symmetric, co-factors, adjoin-matrix, inverse matrix

Module III:

Polynomials, Definitions of polynomial, degree, polynomial equation. Graph of simple polynomials, Quadratic equations, Graph of quadratic equations, Roots of a Quadratic equation

Module IV:

Introduction to Statistics: What is Statistics- Importance of Statistics- Measurement-Scales of Measurements-Data Collection-Classification of Data-Measures of Central Tendency- Need -Type: Mean, median and mode.

4. REFERENCES:

1. Technical Mathematics for Engineering Diploma Courses by Janardhanan Pillai

5. NOTE ON CURRICULAR TRANSACTIONS:

The hearing-impaired children's limited language base prevents them from understanding and developing mathematical skills in par with their hearing peers. The reality for many hearing-impaired children is that they find it difficult to learn mathematical content/processes and to interpret and understand the concepts of mathematics. Hence, before introducing mathematical ideas such as Mensuration, Matrices, Polynomials, Statistics, etc the basics of Mathematics such as Theory of numbers, Review of fundamental operations, exponentiation, Prime numbers, Factorisation, Arithmetic mean, Geometric mean, Compound interest, Simple Interest, Percentage, LCM, HCF, Unit and dimension, Average, complex numbers, separation into real and imaginary parts should be revised.

Special communication methods like Sign Language, gestures, lip reading, speech, writing etc. can be used in classroom teaching. Advanced Technologies like Smart Boards can be used to give visual idea.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- i) A Quiz with 40% weightage,
- ii) An Assignment with 20% weightage and
- iii) A Test paper with 40% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions.

6.1.2. Assignment

The assignment should consist of carefully chosen activities where students can refer internet or the notes given. All assignments should be preceded by assessment guidelines and submission policy. It should contain sufficient guidelines on the effort expected from the students.

6.1.3. Test

Special consideration is to be given even to the mode of written examination. Considering the students' inadequate language ability due to their particular handicap, there is no meaning in testing their writing skills. Essay type questions shall be avoided. Instead more problems for working out shall be given. More of multiple choice questions and fill up the blank type questions has to be given. The special lecture notes prepared according to the syllabus by experts should be

used as reference. This could be of the same pattern as the End Semester question paper.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 2 hours duration.

SAMPLE QUESTIONS

I. Fill in the blanks

(1 Mark each)

- The radius of a circle, $r = \frac{\text{circumference}}{2}$
- If $A = \begin{pmatrix} 1 & 1 & 0 \\ 2 & 3 & 9 \end{pmatrix}$ then $A^T =$ _____
- $\begin{pmatrix} 1 & 0 & 0 \\ 0 & 3 & 0 \\ 0 & 0 & 5 \end{pmatrix}$ is a _____ matrix
- If $A = \begin{pmatrix} 1 & -2 & 3 \\ 0 & 1 & 2 \end{pmatrix}$ then $-2A =$ _____
- $f(x) = 3x + \frac{1}{2}$ is a _____ degree polynomial

II. Answer any 10 questions from the following

(2 Marks each)

- Define Unit Matrix
- Find the volume of a hemisphere of radius 4 *cm*.

3. If $A = \begin{bmatrix} 5 & -7 \\ 2 & 2 \end{bmatrix}$ and $B = \begin{bmatrix} 3 & 2 \\ 2 & -1 \end{bmatrix}$ find BA

4. Evaluate $\begin{bmatrix} 0 & 1 & 1 \\ 1 & 1 & 4 \\ 1 & 4 & 9 \end{bmatrix}$

5. Find the mean of 3, 15, 25, 2, 1, 9, 10, 8, 20, 13

III. Answer any 10 questions from the following

(3 Marks each)

1. Find $A \times B$ if $A = \begin{pmatrix} 1 & -1 \\ 2 & -2 \\ 3 & -3 \end{pmatrix}$ and $B = \begin{pmatrix} 3 & -3 \\ 4 & -4 \\ 5 & -5 \end{pmatrix}$

- Find the Curved Surface Area (CSA), Total Surface Area (TSA) and Volume of a hemisphere of diameter 6 cm.
- Find the mean of marks scored by 10 students in an examination

Marks	10	15	30	43	45
No of Students	2	1	2	3	2

- Find the Lateral Surface Area (LSA), Total Surface Area (TSA) and Volume of a cuboid of length 40cm, breadth 30cm and height 50cm.
- From the following data find the mean

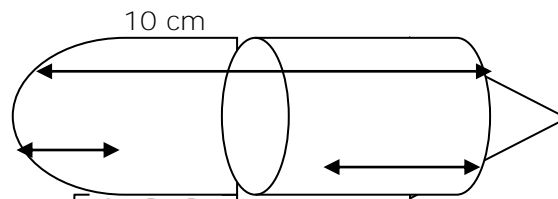
Class Interval	Frequency
0-10	2
10-20	8
20-30	30
30-40	12
40-50	3

6. if $A = \begin{bmatrix} 1 & -2 & 3 \\ -4 & 2 & 5 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 2 \\ 3 & 4 \\ -1 & 1 \end{bmatrix}$ find AB

7. Find B^2 if $B = \begin{bmatrix} 0 & 1 & 1 \\ 1 & 1 & 4 \\ 1 & 4 & 9 \end{bmatrix}$

IV. Answer any 3 questions from the following (5 Marks each)

1. Find the volume of the following combination



2. Find A^{-1} if $A = \begin{bmatrix} 1 & 2 & 3 \\ 0 & 5 & 0 \\ 2 & 4 & 3 \end{bmatrix}$

3. Draw the graph of the polynomial $f(x) = x^2 - 6x - 9$

4. Show that $\begin{bmatrix} x & y \end{bmatrix} \begin{bmatrix} a & h \\ h & b \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = [ax^2 + 2hxy + by^2]$

5. The ends of a right circular cylinder are hemisphere. If the diameter and its maximum length of it are 2cm and 3cm respectively. What is its volume?

303 - COMPUTER FUNDAMENTALS

=====

1. AIM:

To gain hands-on knowledge about computers, hardware, peripherals and software.

2. OBJECTIVES:

After the completion of this course, the student should be able to get knowledge about

- Computer
- Hardware
- Peripherals
- Software

3. SYLLABUS:

MODULE I:

COMPUTER: Data, Instruction, Program; Computer characteristics: Speed, Storage, Accuracy, Diligence; Classification of computers: Micro computers or Personal Computers, notebook Computers or Laptop Computers, Palmtop, Tablet PC, Mini Computer, Mainframe Computers, Super Computers; Elements of computer system: Hardware, Software.

MODULE II:

HARDWARE: Organization; Central Processing Unit: ALU, CU and Memory; Input devices, Output Devices, Memory Units: Structure, Memory access, Capacity, Volatility; Classification: Primary memory: RAM, ROM: different types, Auxiliary Storage: Examples of secondary storage devices: Magnetic Devices- Floppy Disk, Hard Disk, Optical Devices- Compact Disk, DVD, CD-WRITER, USB drive

MODULE III:

PERIPHERALS: Input devices: Keyboard, Mouse, Joystick, Tracker ball, Light Pen, Voice/speech Input terminal / Voice Synthesizer, Digital Camera, Touch Screen, MICR Magnetic Ink Character Recognition, Optical Readers: Optical Mark Reader OMR, Optical Character Recognition-scanner, bar code reader; Output Devices: Visual Display Unit VDU: size, resolution, Plotter, Printer: Dot matrix printer, Inkjet Printer, Laser Printer; Sound cards and speakers.

MODULE IV:

SOFTWARE: Definitions of System software and Application software, Difference between System software and Application Software, Examples of Application software

Programming Languages, Compiler, Interpreter, Linker, Assembler (Concept and Differences)

4. REFERENCES:

4.1. Core References

Anita Goel, Computer Fundamentals, Pearson Education India

PARDEEP K SINHA, Computer Fundamentals, ISBN: 8176567523

V.RAJARAMAN, Fundamentals of Computer, PHI , ISBN: 97881203

4.2. Additional References

Norton Peter, "Introduction to Computers", TMH

4.3. Internet Resources

http://vfu.bg/en/e-Learning/Computer-Basics--computer_basics2.pdf

<http://www.bedford.lib.nh.us/Basics.htm>

<http://www.gcflearnfree.org/computerbasics>

5. NOTE ON CURRICULAR TRANSACTIONS:

The theory need cover basic concepts only. Special communication methods like Sign Language, gestures, lip reading, speech, writing etc. can be used. Advanced Technologies like Smart Boards can be used to give visual idea.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- iv) A Quiz with 40% weightage,
- v) An Assignment with 20% weightage and
- vi) A Test paper with 40% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be of mostly of multiple choice types.

6.1.2. Assignment

The assignment should consist of carefully chosen activities where students can refer internet or the notes given. All assignments should be preceded by assessment guidelines and submission policy. It should contain sufficient guidelines on the effort expected from the students.

6.1.3. Test

Special consideration is to be given even to the mode of written examination. Considering the students inadequate language ability due to their particular

handicap, there is no meaning in testing their writing skills. Essay type questions shall be avoided. Instead more problems for working out shall be given. More of multiple choice questions and fill up the blank type questions has to be given. The special lecture notes prepared according to the syllabus by experts should be used as reference. This could be of the same pattern as the End Semester question paper.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration.

SAMPLE QUESTIONS

I. Name the following (1 mark each)

- a. Name a printer.
- b. Name any application software.
- c. Name an input device used for playing games.
- d. Name the computer which is used in weather forecasting.
- e. Name the input device used to process the cheques in banks.
- f. Name the computer which has a touch screen.
- g. Name an optical device.
- h. Name the device used to take hardcopy output.
- i. Name a volatile memory.
- j. Name two types of input to computer.

II. Choose the correct answer (1 mark each)

- a.is an example of a Flash memory.
(Floppy, USB, Compact Disc)
- b.recognizes marks made by pencil on a paper or card.
(Digital camera, OCR, OMR)
- c. An example of a System Software is
(MS Word, Adobe Photoshop MS Windows XP)
- d.is a set of instructions.
(Information, Program, Data)
- e.is the main memory of the computer.
(Primary memory, Secondary memory, Flash memory)

III. Fill in the blanks (1 mark each)

- a.is the brain of the computer.
- b. An example of an input pointing device is
- c. The program written using High Level Language is called
- d. The most important type of keyboard is

- e. An example of a High Level Language is
- f.is the fastest printer.
- g.is used to get graphical output.
- h. Ais used to operate a Tablet PC.
- i. An example of a secondary storage device is
- j. Laptop computer is also known as

IV. Match the following

(1 mark each)

- | | |
|----------------------|----------------------------|
| a. Palmtop PC | Cartridge |
| b. Assembler | Optical Device |
| c. Magnetic Tape | Human Speech |
| d. Voice Synthesizer | Language Translator |
| e. DVD | Personal Digital Assistant |

V. Write the difference between

(3 marks each)

- a. Data and Information
- b. ROM and RAM
- c. Application Software and System Software
- d. Plotter and Printer.
- e. Input Device and Output Device

VI. Answer any five questions

(5 marks each)

- a. What is VDU? Explain the characteristics of VDU.
- b. What is a) compiler b) interpreter?
- c. Explain the parts of a computer with a neat block diagram.
- d. Define access time. Name the types of memory depending on access time.
- e. Explain any two printers.
- f. Explain a) Machine language b) Assembly language

304 - INTRODUCTION TO OPERATING SYSTEMS I

=====

1. AIM:

To gain hands-on knowledge in basic operations of a GUI Operating System, commands of a non-graphical command line-oriented operating system and simple utilities on a PC

2. OBJECTIVE:

After the completion of this course, the student should be able to:

- Create, Save, Copy, Delete, Organise various types of files and manage the desktop in general
- Use and apply commands of disk operating system
- Use popular utilities on a PC such as file compressor, CD writer, Media Player etc.

3. SYLLABUS:

Module I: Definition of OS, OS functions, Characteristics of modern OS; Classifications: Single User, Multi Tasking, Time Sharing Multi User, Booting, POST

Different operating systems: MS DOS, UNIX, Windows, Linux, Z/OS

Module II: MS- DOS: DOS; Booting; Prompt; File, File name, Directory: Tree structure of directories : Parent Directory, Sub Directory, Current Directory, Root Directory, File system, Directory name; Commands: Internal Commands: wild char, DIR, COPY, TIME, DATE, CLS, MK-DIR, CD, RD, RENAME, VER; External commands: FORMAT, TREE, MORE, XCOPY, DISKCOPY; Batch files: autoexec.bat, config.sys; Limitations of Command Line OS

Module III: WINDOWS: Basic features of GUI OS, Difference between command interface and GUI terminology, Windows: icons, menus, MS Windows parts, use of buttons, folder creation, deletion, mouse operations: click, double click, drag and drop, Windows components: program manager, file manager, clip board, print manager, accessories, Customizing desktop, creating short cuts, Recycle Bin, System Restore Advantages of GUI OS

Module IV: Comparison of Different OS; Operating System installation, disk partitioning, formatting, Plug and Play, Utilities and their use: File compression: ZIP, Unzip, CD Burning, Paint, Text Editors (Names only)

Computer viruses and protection: What is a Virus, its effect; how to protect the PC, What are Firewalls.

Lab Sessions to Practice the following features and commands of Disk Operating System

Booting; Prompt; File, File name, Directory: Tree structure of directories : Parent Directory, Sub Directory, Current Directory, Root Directory, File system, Directory name

Internal Commands: wild char, DIR, COPY, TIME, DATE, CLS, MK-DIR, CD, RD, RENAME, VER

External commands: FORMAT, TREE, MORE, XCOPY, DISKCOPY; Batch files: autoexec.bat, config.sys; Limitations of Command Line OS

Lab Sessions to Practice the following features on a selected GUI

Icons, menus, MS Windows parts, and use of buttons, folder creation, deletion, mouse operations: click, double click, drag and drop,

Windows components: program manager, file manager, clip board, print manager, accessories, Customizing desktop, creating short cuts, Recycle Bin, System Restore Advantages of GUI OS

Lab Sessions to Practice the following with Utilities:

Play/use a variety of utility on a standard PC: Compress and decompress a file, Burn a CD, Convert between standard image file formats, protect the PC from virus; use Firewalls.

4. REFERENCES:

- "Fundamentals & operating system" by All India Saksharatha Foundation
- Windows 95 uncut by Alan Simpson Publisher: Comdex
- Windows 98, MS-Office 2000, Multimedia & Internet Foxpro(principles) by All India Saksharatha Foundation

INTERNET RESOURCES:

www.c3scripts.com/tutorials/msdos/

www.computerhope.com/winxp.htm

5. NOTE ON CURRICULAR TRANSACTION:

Lab sessions shall be allotted to practice the commands and use of utilities. Students should be given 5-10 exercises for each operating system where they should practice various facilities, tools and commands. Students shall be supplied with handouts for each exercise.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- i) A Quiz with 40% weightage,
- ii) A Test paper with 40% weightage and
- iii) Assignments with 20% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be mostly of multiple choice types.

6.1.2. Test

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration.

Sample Quiz

Choose the correct answer

1. The system that secures the computer in a network from unauthorized user
(Virus, OS, Firewall)
2. What mouse operation is used to choose a program
(Click, Double click, Right click)
3. Name the DOS command used to copy a file
(Xcopy, Del, Copy)
4. An external DOS command
(Time, Format, Dir)
5. What is the length of extension name in a file name
(8, 3, 256)
6. A batch file automatically loaded during booting
(test.doc, config.sys, letter.txt)

305 – INTERNET TECHNOLOGIES AND WEB PROGRAMMING USING HTML

=====

1. AIM:

The students will be introduced to the history and evolution of Internet and emerging trends in Internet Applications. The course will **prepare students to design** web pages and provide fundamental knowledge of application development for the internet using HTML. This course will expose the students to the basic fundamentals of the Internet and the programming language that enables the development of Web application. The course aims to give an understanding of basic HTML which is needed to design good pages because it is the language on which Web sites on the Internet are based on.

2. OBJECTIVES:

The course shall give an idea to the students about Internet connectivity, the different Internet applications, etc. This course has an emphasis on the design and techniques for developing internet based applications, mainly focusing on web programming using HTML, and designing static web pages.

On completion of this course the students will:

- Demonstrate an understanding of the Internet and Web Protocols.
- Be able to learn the elements of HTML and create web pages using HTML code
- Demonstrate an understanding of Hypertext Markup Language (HTML) Programming concepts.
- Have a comprehensive knowledge of the semantics and syntax of HTML
- Understand how web pages are published and a site is hosted

3. SYLLABUS:

Module I:

Internet Overview (Introduction only)- Networks, TCP-IP, Web Organization and Addressing; WORLD WIDE WEB (WWW) - History, Working, Web Browsers and their versions, its functions, URLs, URL types, web sites, Domain names, Portals. Web Servers, client and server techniques, Internet Protocols (Concept only)
Connecting to Internet- Dial up access, Direct Internet Access -Cable modems; Wireless connections;
Web Applications - Electronic Mail, Web Search Methodologies, Communication over Internet, Internet Security - Blocking and unblocking sites; Firewalls

Module II:

Web Page Basics - Web Page Building- Markup languages: HTML; Creating an HTML Document; Hyper text and Hyperlinks, markup; Web Page structure, Components;

HTML editors –Visual Editors and Text editors, examples;

Basic HTML tags - Head tags, Body Tags; HTML text, Formatting, HTML Links, HTML Lists

Module III:

Advanced HTML Tags - Menus, images, tables, Frames and Framesets; Forms – Form components; HTML Meta tags- purpose, Web Colours

Cascading Style sheets - Defining and using simple CSS, working with classes, using span tag, external style sheets, DIV etc.

Module IV:

Introduction to WYSIWYG Design tools for HTML - Visual editors – Dream weaver, FrontPage, etc (Introduction), Advantage of Visual editors

Web Hosting and publishing Concepts, Hosting considerations.

Module V: (Flexi-module)

Server Programming: What is server side programming, What are scripts; Why do we need scripts; Scripting Languages: What is **ASP** (active server pages), **PHP** Scripting - PHP coding and basic SQL, creating tables with MySQL, connecting to databases, Web Servers – Apache, IIS, PWS (introduction only), CONNECTIVITY FROM HTML FORMS TO TABLES

4. REFERENCES:

1. Web Technologies Achyut S. Godbole, Atul Kahate Tata McGraw Hill
2. Web Tech. & Design C.Xavier New Age
3. Multimedia & Web Technology – Ramesh Bangia
4. HTML : The complete reference – Thomas A. Powel
5. HTML Examples – Norman Smith, Edward

Internet References:

<http://www.w3schools.com/html/>

http://personalweb.about.com/cs/beginninghtml/a/basic_html.htm

<http://www.simegen.com/school/business/webbuilder/html101/index.html>

<http://www.html.net/tutorials/html/lesson2.php>

<http://www.echoecho.com/html.htm>

<http://www.tizag.com/htmlT/>

5. NOTE ON CURRICULAR TRANSACTIONS:

Students shall be asked to visit web sites and review them. Please note that the lab course 306 and this course are mutually supporting. This course and the lab course 306 should go simultaneously. Special communication methods like Sign Language, gestures, lip reading, speech, writing etc can be used. Advanced Technologies like Smart Boards can be used to give visual idea.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- i) A Quiz with 40% weightage,
- ii) An Assignment with 20% weightage and
- iii) A Test paper with 40% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be of mostly of multiple choice types.

WEB PROGRAMMING SAMPLE QUIZ

Answer all the questions

1. The **** tag makes text...?
 - A. italic
 - B. bold
 - C. underline
 - D. superscript
2. Choose the URL of a search engine
 - A. www.hotmail.com
 - B. www.keralauniversity.edu
 - C. www.keralapsc.org
 - D. www.google.com
3. Notepad is a _____
 - A. Web Browser
 - B. Publishing Tool
 - C. HTML File
 - D. Text Editor
4. The **<hr>** tag is used to add
 - A. a horizontal line
 - B. a paragraph

- C. a new line
 - D. a row in a table
5. .Gif and .jpg are the two main types of what?
- A. Sound files
 - B. Movie files
 - C. HTML files
 - D. Image files
6. Which of the following is not a form field?
- A. Radio button
 - B. Text Area
 - C. Submit Button
 - D. Clear Button
7. What is the name of the language you use to write a web page?
- A. HTTP
 - B. FTP
 - C. URL
 - D. HTML
8. What is an URL?
- A. a computer software program
 - B. the address of a document or "page" on the World Wide Web
 - C. Unlimited Resources for Learning
 - D. Home page
9. <a> and are the tags used for _____
- A. Aligning text
 - B. Adding links
 - C. Audio voiced text
 - D. Action script
10. The first page of any web site is called _____
- A. Index page
 - B. Link
 - C. Home page
 - D. Web page

6.1.2. Assignment

The assignment should consist of carefully chosen activities where students can refer internet or the notes given. All assignments should be preceded by assessment guidelines and submission policy. It should contain sufficient guidelines on the effort expected from the students.

- a) Visual Editor
 - b) Text Editor
 - c) Web browser
 - d) MS Word
8. All web addresses start with which of the following?
- a) htp://
 - b) http://
 - c) http:/
 - d) www
9. The <p> tag is used to add
- a) a horizontal line
 - b) a paragraph
 - c) a new line
 - d) a row in a table
10. A web page is located using a
- a. Universal Record Linking
 - b. Uniform Resource Locator
 - c. Universal Record Locator
 - d. Uniformly Reachable Links

II. Fill in the blanks (1 mark each)

1. <a> tag is used for _____
2. Gif and jpf are two main types of _____ files
3. The first page for a web site is called a _____
4. http stands for _____
5. ^{and} are used for _____

III. Give the HTML tags for the following. (1 mark each)

1. To add an image.
2. To insert a horizontal rule.
3. To insert a bulleted list.
4. To change colour of text.
5. To insert a row in a table.

UNIT II

V. Answer any 5 questions. (1 mark each)

1. Create an HTML document to display the following text in the title bar of the browser. "Welcome to the world of computers"
2. How do we write the following chemical symbols using HTML?
 1. H₂O
 2. H₂SO₄
 3. HNO₃
 4. NH₃
3. How can we make a picture as a background on a web page?
4. How can we give a background image to a table?
5. What is HTML used for?

6. Name any 3 front-end tools for making web pages.
7. How can we make a picture a link?

306 -INTERNET TECHNOLOGIES AND WEB PROGRAMMING USING HTML Lab

=====

1. AIM:

To provide a practical understanding of **designing** web pages and provide fundamental knowledge of application development for the internet using HTML. The course aims to give an understanding of Internet connectivity, different Internet applications like email, chatting, Bluetooth, basic HTML which is needed to design good pages because it is the language on which Web sites on the Internet are based on.

2. OBJECTIVES:

The course shall give an idea to the students about Internet connectivity, the different Internet applications, etc. This course has an emphasis on the design and techniques for developing internet based applications, mainly focusing on web programming using HTML, and designing static web pages.

On completion of this course the students will:

- Learn about Connecting to Internet- Dial up access, Direct Internet Access -Cable modems; Wireless connections;
- Internet Addresses, Adding to Favorites, Bookmarks
- Electronic Mail
- Web Search Methodologies
- Communication over Internet
- Internet Security - Blocking and unblocking sites; Firewalls
- File Transferring- Downloading Files from Internet, blue tooth;
- Introduction to: e-learning, e-commerce, e-government; News Groups, Blogs
- creating web pages using HTML code
- An understanding of Hypertext Markup Language (HTML) Programming concepts.
- Demonstrate an understanding of the Internet and Web Protocols.
- Be able to learn the elements of HTML and create web pages using HTML code
- Demonstrate an understanding of Hypertext Markup Language (HTML) Programming concepts.
- Have a comprehensive knowledge of the semantics and syntax of HTML
- Understand how web pages are published and a site is hosted

3. SYLLABUS:

The practical sessions shall consist of exercises on:

- Connecting to Internet- Dial up access, Direct Internet Access -Cable modems; Wireless connections;
- Internet Addresses, Adding to Favorites, Bookmarks
- Electronic Mail: Select an e-mail client for use in sending, receiving, and filing e-mail messages; Mailid creation, Send, receive, answer, forward, and file e-mail messages with attachments. and Mailing Lists, Reading, composing and sending email; difference between CC and BCC, Use an address book to keep track of the e-mail addresses of people to whom you send mail; Create a mailing list that enables you to send a message to several people at once; Controlling emails: Filtering email, Replying to messages automatically, Blocking junk mail
- Web Search Methodologies: Searching the Web; search engines – Search Criterion, Advanced Search Techniques, site searching, image searching, audio & video searching; Wikipedia, YouTube
- Communication over Internet: Instant messaging, Chatting, Using Webcam; Internet Text, Voice and Video Communications: Audio and video teleconferencing; TV on the Internet
- Internet Security - Blocking and unblocking sites; Firewalls
- File Transferring- Downloading Files from Internet, blue tooth;
- Introduction to: e-learning, e-commerce, e-government; News Groups, Blogs
- create html documents
- create html documents
- Format text in html documents like bold and italic, etc.
- Add headers to the document
- Add paragraph and break tags to your document
- Add a horizontal rule
- Add unordered list to your document
- Add ordered list to your document.
- Add definition list to your document
- Add links – internal, external and global
- Add images , videos and other multimedia files
- Add tables
- To create forms
- Add Block quote
- Give Attributes

- Add Marquee

4. REFERENCES:

1. Web Technologies Achyut S. Godbole, Atul Kahate Tata McGraw Hill
2. Web Tech. & Design C.Xavier New Age
3. Multimedia & Web Technology – Ramesh Bangia
4. HTML: The complete reference – Thomas A. Powel
5. HTML Examples – Norman Smith, Edward

Internet References:

<http://www.w3schools.com/html/>

http://personalweb.about.com/cs/beginninghtml/a/basic_html.htm

<http://www.simegen.com/school/business/webbuilder/html101/index.html>

<http://www.html.net/tutorials/html/lesson2.php>

<http://www.echoecho.com/html.htm>

<http://www.tizag.com/htmlIT/>

5. NOTE ON CURRICULAR TRANSACTIONS:

Students shall practice around 20 -25 questions and shall be given a mini project to develop a website applying the tags they have been taught in the course 305.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- iv) A Quiz with 40% weightage,
- v) A Test paper with 40% weightage and
- vi) Lab Record with 20% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be of mostly of multiple choice types and shall contain both concepts and syntax analysis.

6.1.2. Lab Record

Each candidate shall submit a record work in which at least 20 practical assignments based on the syllabus shall be submitted.

6.1.3. Test

This could be of the same pattern as the End Semester question paper.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration. The End Semester Assessment shall be based on the following:

- i) 70% for successful conduct of assigned tasks/experiments
- ii) 15% for a Quiz
- iii) 15% for Lab Record

Sample Quiz:

1. The language used to develop web page is _____
A. HTML B. HTTP
C. Browser D. Protocol
2. Form tag has the attributes _____
A. action & method B. form & action
C. method & form D. All of these
3. _____ tag is used with <option> tag to give list of items.
A. <input> B. <Frame>
C. <Select> D. A and B
4. How can you make a list that lists the items with numbers?
A. <dl> B.
C. <list> D.
5. In email address _____ character is essential (necessary)
A. % B. &
C. / D. @

Sample Question for Lab

Write the HTML code to make a Web Page as given below:

ATOMIC ENERGY CENTRAL SCHOOL, No. Mumbai
(AEE
An autonomous institution under Govt of Mumbai)

AECS-4/Exam/2011 3-2-2011

DATE SHEET FOR CLASS IX

Date & Time	Subject
07-03-2011 8.00 am to 11.00 am	Social Studies
09-03-2011 8.00 am to 11.30 am	English
11-03-2011 8.00 am to 11.00 am	Science
15-03-2011 8.00 am to 11.00 am	Mathematics
17-03-2011 8.00 am to 11.03 am	Hindi

Note: Reporting Time : 7.30 am
Distribution of Question paper : 7.45 am
Question paper reading time : 7.45 am to 8.00 am
Commencement of Exam : 8.00 am

(B.S.K. Raju)
Principal, AECS-4

- i) Text style should be Verdana and font color of table should be Red
- ii) Table should have a border of color blue.

35 marks

Semester IV

Total Marks 600

Subject Code and Name	IA Max.	ESE Max.	ESE Min. Pass	Total Marks	Min. Pass
401 Communicative English II	25	75	30	100	50
402 Mathematics II	25	75	30	100	50
403 Digital Electronics	25	75	30	100	50
404 Programming in C	25	75	30	100	50
405 Programming Lab	25	75	30	100	50
406 PC Software I Lab	25	75	30	100	50

401 - COMMUNICATIVE ENGLISH II

=====

1. AIM:

- To build a basic vocabulary of a minimum of 500 words.
- To teach grammatical structures.
- To enhance **the student's ability to read and write the English used in** daily life.
- To familiarize students to write in academic, social and work related situations.

2. OBJECTIVES:

On completion of this course, the students should be able to

- Understand the usage of English in everyday life
- Respond to communication in English in different contexts

3. SYLLABUS:

MODULE I:

Prose: 1 chapter; Sentence construction, KINDS OF SENTENCES: Declarative, interrogative, imperative, exclamatory, uses, How to change from one sentence to another. Pronouns – types and forms, Preposition

Module II:

Prose: 1 chapter; SENTENCE PATTERN: S+ V+ O, S+V+DO S+V+IO+DO, S+V+A, S+V,

Write the sentences in a particular pattern.

ADJECTIVES; Tenses- Simple, Continuous forms of tenses- (Perfect and perfect continuous), Past, present, future

Module III:

Prose: 1 Chapter; Verbs – Types, Concord;

LETTER WRITING: Personal, Formal; Paragraph writing

Module IV:

COMPREHENSION PASSAGES; arranging the sentences of a paragraph in order;

Punctuations (basics2); Adverbs- Types.

Form sensible sentences from jumbled sentences.

4. REFERENCES:

4.1. Core Reference

Raymond Murphy, Essential Grammar in use (2nd edition) , ISBN-13 978-0-521
Cambridge Uni press 133393-7

Raymond Murphy, Essential Grammar in use (3rd edition) , ISBN-13 978-0-521
Cambridge Uni press 133393-7

Wren and Martin, High school English Grammar and Composition

S.Chand and CompanyLtd. ISBN:81-219-2197-X Rs:215

4.2. Additional References

Improve your child's grammar level (1-5) Martin Gilmartin, Cescent News (K.L)
SDN.BHD

IELTS &TOEFL Made Easy, George John B-Ghud

4.3. Internet Resources

www.englishpage.com

www.englishgrammar101.com

www.ego4u.com

www.usingenglish.com

www.grammarbook.com

www.learn4good.com

www.englishclub.com

5. NOTE ON CURRICULAR TRANSACTIONS:

Language teaching to hearing children is based on pedagogies reliant on speaking and listening. It is fruitless to use such techniques with HI children. These facts shape our choice of materials, our teaching methodologies and our methods of testing. Even our aims and objectives are different for the differently-abled. The syllabus, the materials chosen and teaching and testing methods all reflect this. An appreciation of this essential difference is imperative to the success of any attempt to frame a syllabus for differently-abled children. We can use special communication methods like Indian Sign language, Gestures, lip reading, speech, writing etc. Innovative teaching techniques should be used in view of the severe communication problems of the hearing impaired students. Use of visual media, mainly computers, smart boards will also be extensively used as an effective teaching aid.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- iv) A Quiz with 40% weightage,
- v) An Assignment with 20% weightage and
- vi) A Test paper with 40% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be of mostly of multiple choice types.

6.1.2. Assignment

The assignment should consist of carefully chosen activities where students can refer internet or the notes given. All assignments should be preceded by assessment guidelines and submission policy. It should contain sufficient guidelines on the effort expected from the students.

6.1.3. Test

Considering the students inadequate language ability due to their particular handicap, long essay type questions have to be avoided for written exams. More of multiple choice questions and fill up the blank type questions has to be given. **Questions should be in such a way to measure the level of student's ability in understanding the concepts.** There are prescribed text books. The special lecture notes prepared by experts according to the syllabus should be used as reference. The test could be of the same pattern as the End Semester question paper.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration.

Sample Questions

I. Underline the most suitable Adjectives in the brackets.

1. Mr.Smith bought a (gold, red) Necklace for his wife.
2. The strong man lifted the (heavy, brown) weights easily.
3. People wear (pink, fur) coats in winter because of the cold weather

II. Identify the sentences.

1. The cow is a domestic animal.
2. Where do you live?
3. Have mercy upon.
4. How cold the night is!

III. Write a paragraph about:

- (a) Your best friend
- OR
- (b)Your family

402. MATHEMATICS II

=====

1. AIM:

To introduce mathematical concepts.

2. OBJECTIVES:

Specific objectives of the course are:

(a) to give an understanding of important mathematical ideas such as Fundamental operations, Sets, Integration, Differentiation, Trigonometry, Graphs, Functions and Limits, Analytical Geometry, Statistics etc, and to introduce students to mathematical techniques which are relevant to the real world;

(b) to enhance those mathematical skills required for further studies in *mathematics*.

3. SYLLABUS:

Module I:

SET THEORY- Set theory concepts, set operations, characteristic functions, fuzzy set theory basics

Module II:

Calculus: Functions and Limits, Differentiation, Differentiation of trigonometric functions, Product rule, Quotient rule, Indefinite Integrals and Method of integration

Module III:

TRIGONOMETRY- Introduction, trigonometric functions, relation between the trigonometric functions, trigonometric functions of particular angles, properties and solutions of triangles – the sine rule, the cosine rule area of a triangle, compound angles and reduction formulae

Module IV:

ANALYTIC GEOMETRY: Co-ordinates: Rectangular Cartesian Co-ordinates, Distance formulae, Section formulae, Centroid of a triangle, area of a triangle with given vertices. Equations and graphs: Graph of an equation, Graph of Trigonometric Functions, The straight line –Equation of the Horizontal and vertical lines, slope, intercept form, slope point form, two point form, intercept form, reduction of the general equation of a line, angle between the line, point of intersection of two lines.

4. REFERENCES

1. Technical Mathematics for engineering diploma Courses by Janardhanan Pillai

5. NOTE ON CURRICULAR TRANSACTIONS:

Before introducing mathematical ideas such as Set theory, Calculus, Trigonometry etc the basics of Mathematics such as fundamental operations, mathematical tables such as natural signs, natural cosines and natural tangents should be revised. Special communication methods like Indian Sign Language, gestures, lip reading, speech, writing etc. can be used. Advanced Technologies like Smart Boards can be used to give reinforce abstract ideas.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- i) A Quiz with 40% weightage,
- ii) An Assignment with 20% weightage and
- iii) A Test paper with 40% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be mostly of multiple choice types.

6.1.2. Assignment

The assignment should consist of carefully chosen activities where students can refer internet or the notes given. All assignments should be preceded by assessment guidelines and submission policy. It should contain sufficient guidelines on the effort expected from the students.

6.1.3. Test

The special lecture material prepared according to the syllabus by experts should be used as reference. The test could be of the same pattern as the End Semester question paper.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration.

Sample Question:

Fill in the blanks

(1 mark each)

1. The complement of set A is written as _____

2. $n(\{0\}) = \underline{\hspace{2cm}}$
3. If $y = \frac{7}{x^3}$, $\frac{dy}{dx} = \underline{\hspace{2cm}}$
4. $\int x^2 = \underline{\hspace{2cm}}$
5. $\tan \theta = \frac{\sin \theta}{\underline{\hspace{1cm}}}$

Answer any 10 questions from the following (1mark each)

1. Express $A = \{X: X \text{ is a multiple of 3 and is less than 25}\}$ in roster form
2. Define Joint set
3. Evaluate $\lim_{x \rightarrow 2} \frac{x^2 - 5x + 6}{x^2 + x - 6}$
4. Find the slope and intercepts made on the axes of the line $3x + 4y - 15 = 0$
5. Find the centroid of a triangle whose vertices are $(6, 2)$, $(1, -2)$, and $(14, 15)$

Answer any 10 questions from the following

1. Given $A = \{x: x \text{ is multiple of 5 and is less than 30}\}$
 $B = \{x: x \text{ is a square of the natural number and is less than 28}\}$
 $C = \{x: x \text{ is multiple of 4 and is less than 28}\}$
 $D = \{x: x \text{ is a prime number less than 28}\}$
 Express A, B, C, D in roster form and find
 a. $B \cup C$ b. $C \cup A$ c. $D \cup B$ d. $A \cup D$ e. $A \cap B$ f. $B \cap C$ g. $C \cap A$ h. $B \cap D$
2. Find the co-ordinates of the point dividing the segment joining $(4, -3)$ and $(1, 4)$ in the ratio 3:2 (i) internally and (ii) externally
3. Find the angle between the lines with slopes 2 and $\frac{1}{3}$.
4. Show that $\sin 30 \cos 45 + \cos 30 \sin 45 = \frac{\sqrt{3} + 1}{2\sqrt{2}}$
5. If $x = 45^\circ$ verify that $\cos 2x = 1 - 2\sin^2 x$

Answer any 3 questions from the following (5x3=15 Marks)

1. A tower cast a shadow 90m long when the sun's altitude is 30° . Find the height of the tower
2. Find the value of 'a' so that the straight line $5x + 2y - 4 = 0$, $2x + ay + 11 = 0$ and $3x = 4y + 18$ are concurrent.
3. Integrate a. $\frac{1}{\sqrt{3}-2x}$ b. $\frac{1}{1-4x}$
4. $\int \sin 3x \cos 4x$ with respect to x
5. Find the area of the quadrilateral whose vertices are $(1, 2)$, $(-2, 6)$, $(-3, -6)$ and $(2, -7)$

403 - DIGITAL ELECTRONICS

=====

1. AIM:

To gain basic knowledge on digital logic and circuits.

2. OBJECTIVES:

- To review data representation techniques
- To introduce students to basic concepts of digital logic
- To introduce the students to the design of basic logic circuits
- To introduce students to some commonly used combinational and sequential circuits

3. SYLLABUS:

Module I:

Data Representation and Boolean Algebra, Data Representation, Concepts of number system bases – binary, decimal and hexadecimal number systems and conversions between each. Binary arithmetic-binary addition, subtraction, 1s and 2s complement system, multiplication. Codes- BCD, ASCII, Floating point representation in binary

Module II:

Boolean Algebra- Basic functions, AND, OR and NOT, Truth table: Combinational logic – AND and NOT, AND and OR. Laws of Boolean Algebra, Other Boolean functions – NAND, NOR, XOR, Flip flops (SR, JK, T, D)

Module III:

Adders (Full and half), comparators, counters, Decoders and display, Shift registers, keyboard encoder.

Module IV:

Introduction to Integrated circuit -Digital and linear, SSI, MSI, LSI and VLSI classification. Digital ICs- TTL, CMOS and ECL families, Advantages and limitations of ICs,

4. REFERENCES:

4.1. Core References

- 1) AdityaChaturvedi, "Fundamentals of Digital Electronics" ,Khanna Book Publishing Co.(P) Ltd,New Delhi
- 2) Agarwal-"Foundations of analog & Digital electronic Circuits" ,Elsevier
- 3) R.P. Jain , "Modern digital electronics" , 3rd edition , 12th reprint TMH Publication, 2007

4) A.A Phadke& S.MDeokar, "Digital Logic Design and VHDL" – Wiley India Pvt Ltd

4.2. Additional References

1) R. L. Tokheim, Digital electronics, Principles and applications, 6th Edition, Tata McGraw Hill Edit

2) F. Vahid: Digital Design: Wiley Student Edition, 2006

4.3. Internet resources

<http://www.asic-world.com/digital/tutorial.html>

<http://www.electronics-tutorials.ws/>

<http://www.abcofelectronics.com/>

<http://www.electronicspoint.com/electronics-tutorials-f101.html>

5. NOTE ON CURRICULAR TRANSACTIONS:

This subject should be taught based on basic concepts only. Circuit level operation should be stressed. Special communication methods like Sign Language, gestures, lip reading, speech, writing etc. can be used. Advanced Technologies like Smart Boards can be used to give visual idea.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- i) A Quiz with 40% weightage,
- ii) An Assignment with 20% weightage and
- iii) A Test paper with 40% weightage.

6.1.2. Assignment

The assignment should consist of carefully chosen activities where students can refer internet or the notes given. All assignments should be preceded by assessment guidelines and submission policy. It should contain sufficient guidelines on the effort expected from the students.

6.1.3. Test

Special consideration is to be given even to the mode of written examination. Considering the students inadequate language ability due to their particular handicap, there is no meaning in testing their writing skills. Essay type questions shall be avoided. Even short answer questions should be limited to two or three sentences. More of multiple choice questions and fill up the blank type questions has to be given. The special lecture notes prepared according to the syllabus by

experts should be used as reference. This test paper could be of the same pattern as the End Semester question paper.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration.

SAMPLE TEST

Fill in the blanks

(5 x 1 = 5 marks)

1.is a base two system.
2. The 1's complement of 1011 is
3. The positional weight of 9 in the number 2490 is
4. The positional weight of 0 in 11111.011 is
5. Small computers usecode to convert from keyboard character to binary.

Match the following

(5 x 1 = 5 marks)

- | | |
|-----------------------------|---------------|
| 1. Hexadecimal System codes | Alphanumeric |
| 2. $(101)_2$ | base 8 system |
| 3. EBCDIC | 5 |
| 4. Octal number system | ASCII |
| 5. 7 bit code | 16 symbols |

Answer any four questions

(2 x 5 = 10 marks)

1. Name 3 commonly used binary codes.
2. Find the 2s complement of the number 10101.
3. Convert decimal 15 to binary.
4. Subtract 0111 from 1100.
5. What is meant by LSB and MSB?

Answer any four questions

(5 x 4 = 20marks)

1. What is the difference between a binary number system and a decimal number system?
2. Using double dabble method convert the following to binary.
a) 248 b)35.25
3. Convert the following to its decimal equivalent.
a) $(1001.101)_2$ b) $(11011.1001)_2$
4. Convert the following to its hexadecimal equivalent.
a) $(111110101100)_2$ b) $(11000101)_2$
5. Write a note on any two number systems.

404. PROGRAMMING IN C

=====

1. AIM:

To understand what programming language is, its use, learn the basic components and structure of a C program; learn to define variables, and use operators and operands to create C expressions and statements, memory, input and output, to develop programming skills and write small programs.

2. OBJECTIVES:

The main objective of this course is

- To provide an introduction to *computer programming*.
- To learn the basic concepts of computing.
- To know the methodology of problem solving.
- To develop skills in programming using C language.

3. SYLLABUS:

Module I: (Introduction only)

Introduction to programming: Machine Language, Assembly Language, High Level Language, Need for computer languages

PROGRAMMING: Simple Algorithm, Flow charts, tracing flow charts

Program Writing in C – Structure of the Program, top-down design, Source code, Object code, Executable file, extensions of different files, Sample Programs written in C

Module II:

VARIABLES AND CONSTANTS; Rules for naming the Variables/Identifiers; Identifiers and keywords

BASIC DATA TYPES IN C - int, char, float, double; Declarations;

Operators and Expressions: Assignment Operator, Arithmetic Operators and Arithmetic exp., Relational Operators and Relational exp., Logical Operators, Expression Evaluation (Precedence of Operators); Conditional operators

INPUT-OUTPUT: Simple I/O statements - scanf, printf, gets, puts, getchar, putchar,

Control structures, if, if else, switch-case, for, while, do-while, goto, break, continue.

Strings: Defining and operations

Module III:

LIBRARY FUNCTIONS AND PRE-PROCESSOR COMMANDS:

Different Library functions – Math functions, character functions, string functions, IO functions – their use

#include, #define

ARRAYS - One dimensional array, declaration, initialization and processing; Array of strings

Two dimensional arrays- Matrix operations

Module IV:

FUNCTIONS - User defined functions, declaration, definition & scope

Storage types: Automatic, external, register and static variables, Scope of function variables

Passing arguments - call by value and call by reference, returning function results, functions with no return.

Module V:

POINTERS - The & and * Operators, pointer declaration, Operations on pointers, Pointer Arithmetic

STRUCTURES - Defining structures, assigning values to structure variables; Initializing structures

4. REFERENCES:

1. Mastering C by Venugopal, Prasad – TMH
2. Complete reference with C Tata McGraw Hill
3. C Programming E.Balagurusamy Tata McGray Hill
4. How to solve it by Computer : Dromey, PHI
5. Schaums outline of Theory and Problems of programming with C :
Gottfried
6. The C programming language : Kerningham and Ritchie
7. Programming in ANSI C : Ramkumar Agarwal
8. Let Us C by Kanetkar
9. K R Venugopal & S R Prasad. "Mastering C" Tata-McGraw Hill-2207.
10. An introduction to data structures with applications, Jean-Paul Trembly
and Paul Sorenson, (2nd edition), 1884
11. Test your C Skills by Kanetkar

Internet References:

1. <http://www.cprogramming.com>
2. <http://www.programmingsimplified.com/c-program-examples>
3. http://www.mu.ac.in/myweb_test/mca_sem1syll.pdf
4. http://www.physics.drexel.edu/courses/Comp_Phys/General/C_basics/

5. <http://www.cprogrammingexpert.com/>

5. NOTE ON CURRICULAR TRANSACTIONS:

The programming concepts should be arrived at logically through algorithm and flowchart. Simple programs should be used to explain concepts. However a large number of examples could be practiced. Even a hearing student finds difficulty in understanding the concept of memory and line-by-line execution of programs. NISH has developed a package to teach the memory concept. Software has been developed which provides visualization of the memory. It shows how memory locations are created for storing the variables. It also shows the changes to the various variables during the execution of each statement. This could be used. Even in classroom lectures, by drawing out memory boxes and allocating values to them will enhance the understanding of students. This can be used to explain storage classes, functions and pointers.

Please note that the lab course 405 and this course are mutually supporting. This course and the lab course 405 should go simultaneously. Special communication methods like Sign Language, gestures, lip reading, speech, writing etc can be used. Advanced Technologies like Smart Boards can be used to give visual idea.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- iv) A Quiz with 40% weightage,
- v) An Assignment with 20% weightage and
- vi) A Test paper with 40% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be mostly of multiple choice types and shall contain both concepts and program analysis.

Sample Quiz:

1. Which of the following is a valid keyword in C?
 - i) intcount
 - ii) -Sum
 - iii) char
 - iv) equals
2. Which of the following copies one string to a variable?
 - i) strcpy ()
 - ii) stringadd ()
 - iii) strcat ()
 - iv) strcpy ()
3. printf() function is used for _____

1. Programming language is an example of software application.
 2. A group of more than one variable of the same data type is called an array.
 3. The float data type cannot hold fractional part.
 4. The function islower () converts to lower case letter.
 5. For an array in C indexing starts at 0.
- 3.** Fill in the blanks (1 mark each)
- a. The operator && is an example for _____ operator.
 - b. Step by step way of solving a problem is called _____
 - c. A _____ converts the statements of a high-level programming language into machine language.
 - d. A _____ box is the decision box in a flow chart.
 - e. _____ header file is used for including the function isalpha() in a C program

UNIT III

- 4.** Write declaration statements for the following. (1 mark each)
1. temp = y
 2. X = 25600999876
 3. gender = female
 4. price = 40.04
 5. _num _loop= 26

UNIT IV

- 5.** Answer **any five** questions. (2 marks each)
- a) Explain the basic data types in C.
 - b) List the important relational operators in C.
 - c) Write an algorithm to find the area of a rectangle
 - d) Which are the different input and output functions in C?
 - e) What are post increment and pre increment operators?
 - f) What is a flowchart? Explain the different symbols used in flow charts.

UNIT V

- 6.** What would be the output of the following programs? (10 marks)
1.

```
#include<stdio.h>
main()
{
    int a, b, c;
    a=2;
```

```

        b=7;
        c = (a>b) ? a : b;
        printf ("%d ", c);
    }
2. main ()
{
    int a,b,c,d;
    a=15;
    b=10;
    c=a++ - b;
    printf("a=%d, b=%d, c=%d\n", a, b, c);
    d=++a - b;
    printf("a=%d, b=%d, c=%d\n", a, b, d);
}

```

UNIT VI

7. Answer any one question 30
marks

a. Write a C program to generate first n terms of a Fibonacci series.
(eg: 0 1 1 2 3 5)

Or

b. Write a program to find the multiplication table of any number.

405 - PROGRAMMING WITH C - Lab

=====

1. AIM:

To provide a practical understanding of problem solving, running programs, learning the basic components and structure of a C program, to define variables, and use operators and operands to create C expressions and statements, input and output.

2. OBJECTIVES:

The main objective of this course is

- To provide a practical knowledge of *computer programming*.
- To learn the basic concepts of computing.
- To know the methodology of problem solving.
- To develop skills in programming using C language.

3. SYLLABUS:

The Lab sessions shall consist of:

1. Programs to check the output of sample Programs written in C
2. Programs with output statements
3. Programs using Simple I/O statements
4. Programs based on Control statements
 - Loop statements
 - Conditional statements
 - nested loops
5. Programs using strings
6. Programs using different Library functions
7. Programs based on one dimensional array – input, output, addition, sorting, maximum, minimum, average values
8. Programs based on two dimensional array – matrix input, output, Addition, difference and product of 2 matrices, Transpose matrix, Diagonal Matrix
9. Programs based on pointers and operations on pointers – Pointer addition and other operations, swapping variable values, etc.
10. Programs based on Functions – Functions with no arguments, Functions passing arguments, Functions with no return and Functions returning value
11. 2 or 3 Programs based on Structures

4. REFERENCES:

1. Mastering C by Venugopal, Prasad – TMH
2. Complete reference with C Tata McGraw Hill
3. C Programming E. Balagurusamy Tata McGraw Hill
4. How to solve it by Computer : Dromey, PHI
5. Schaums outline of Theory and Problems of programming with C :
Gottfried
6. The C programming language : Kerninghan and Ritchie
7. Programming in ANSI C : Ramkumar Agarwal
8. Let Us C by Kanetkar
9. **K R Venugopal & S R Prasad. "Mastering C" Tata-McGraw Hill-2207.**
10. An introduction to data structures with applications, Jean-Paul Tremblay and Paul Sorenson, (2nd edition), 1984
11. Test your C Skills by Kanetkar

Internet References:

1. <http://www.cprogramming.com>
2. <http://www.programmingsimplified.com/c-program-examples>
3. http://www.mu.ac.in/myweb_test/mca_sem1syll.pdf
4. http://www.physics.drexel.edu/courses/Comp_Phys/General/C_basics/
5. <http://www.cprogrammingexpert.com/>

5. NOTE ON CURRICULAR TRANSACTIONS

Students shall practice at least 10 questions on each concept.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- vii) A Quiz with 40% weightage,
- viii) A Test with 40% weightage and
- ix) Lab Record with 20% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be mostly of multiple choice types.

6.1.2. Test

The test shall consist of an assigned task which the students shall perform on the computer.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration. The End Semester Assessment shall be based on the following:

- i) 70% for successful conduct of assigned tasks/experiments
- ii) 15% for a Quiz
- iii) 15% for Lab Record

Sample Quiz:

- i) What will be the output of the following program?

```
main()
{
    int a=10, b;
    b = (a==6) ? 890 : 200;
    printf("%d", b);
}
```
- ii) What will be the output of the following C program?

```
main ()
{
    int a=10, b=10, c;
    if ( (a>10) || (a>b) )
        printf("c = %d ", 100);
    else
        printf("c = %d ", 200);
}
```
- iii) What will be the output of the following C program?

```
#include<stdio.h>
{
    int num, a=5;
    num= a--;
    printf ("%d %d", num, a);}
}
```

406 - PC SOFTWARE I LAB

=====

1. AIM:

To gain hands-on knowledge of standard application software and utilities

2. OBJECTIVES:

After the completion of this course, the student should be able to:

- Use a standard word processing package exploiting popular features.
- Use a standard desktop publishing software package exploiting popular features.
- Use popular utilities on a PC such as file compressor, CD writer, Media Player etc.
- Browse the internet and search for required information successfully.

3. SYLLABUS:

1. Lab Sessions to Practice the following features on a selected Word Processor (depending on availability):

General: Menus, Shortcut menus, Toolbars, Customizing toolbars, Creating and opening documents, Saving documents, Renaming documents, Working on multiple documents, Close a document ; Working With Text : Typing and inserting text, Selecting text, Deleting text, Undo, Formatting toolbar, Format Painter, Formatting Paragraphs: Paragraph attributes, Moving, copying, and pasting text, The clipboard, Columns, Drop caps; Styles : Apply a style, Apply a style from the style dialog box, Create a new styles from a model, Create a simple style from the style dialog box, Lists : Bulleted and numbered lists, Nested lists, Formatting lists Tables : Insert Table button, Draw a table, Inserting rows and columns, Moving and resizing a table, Tables and Borders toolbar, Table properties Graphics : Adding clip art, Add an image from a file, Editing a graphic, AutoShapes; Spelling and Grammar: AutoCorrect, Spelling and grammar check, Synonyms, Thesaurus; Page Formatting: Page margins, Page size and orientation, Headers and footers, Page numbers, Print preview and printing;

2. Lab Sessions to Practice the following features on a selected Desktop Publisher (depending on availability)

Introduction: Advantage, Page maker window: Components of page maker window, Creating a new document, New document windows, Entering text, Formatting type, Changing character specification, Saving a Document,

Developing paragraphs, Formatting paragraphs, Editing a document: Free form and frames, Creating a frame, Threading and Unthreading text, Selecting text, Editing text, Inserting and removing pages, Adjusting spacing of characters, Words and lines, Adding Design Elements: Adding graphics, Changing page maker options, Creating graphics, Importing graphics, OLE

Setting up Templates: Setting up page maker templates, Creating news letter templates, Creating a fact sheet templates, Creating templates from existing documents, Custom styles: Defining styles, Applying styles, using layers: Layers palette, Moving objects between layers, Creating default layers

Printing, Adding color: Using page maker's default colors, working with color graphics, Defining custom colors, Editing, Copying, Removing and Replacing colors, Screening Text and Graphics, Developing Long Documents: Using the story editor, Spell check, Using the find feature, Using the change feature, Linking text and Graphics, Compiling Chapters into a book, Creating an Index, Creating a Table of content, Using photo shop filters, ISM: Keyboard layout, Malayalam Publishing

3. Lab Sessions to Practice the following features on a selected Browser(dependent on availability):

Standard Tool Bars: Basic Browsing Buttons: forward, backward, home, favorites, adding to favorites, stop, save, save as, Saving an Image from the Web, printing, Specifying a Home Page, Browsing: Using Web URLs, Signing up for email service

4. INTERNET RESOURCES:

www.fgcu.edu/support/office2000
www.openoffice.org Open Office Official web site
www.microsoft.com/office MS Office web site
www.lgta.org Office on-line lessons
www.learnthenet.com Web Primer

5. NOTE ON CURRICULAR TRANSACTIONS:

Students should be presented with 5-10 exercises for each application where they should practice various facilities and tools provided by the application. Students shall be supplied with handouts for each exercise.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- A Quiz with 40% weightage,
- A Test with 40% weightage and
- Lab Record with 20% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be mostly of multiple choice types.

6.1.2. Test

The test shall consist of an assigned task which the students shall perform on the computer.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration. The End Semester Assessment shall be based on the following:

- iv) 70% for successful conduct of assigned tasks/experiments
- v) 15% for a Quiz
- vi) 15% for Lab Record

Sample Questions:

1. Create a new folder named IA1 in D drive.
2. Type the given text and save it in IA1 with the name PCS_test
3. **Insert 'Date and time' at the end of the document.**
4. Change the line spacing to double
5. Apply a suitable page border
6. Change the font style of questions under 'Fill up the Blanks' to Times New Roman.
7. Change the font size of this to 16
8. Image to be inserted is found from the given CD
9. Save the document in a CD
10. Print the document in draft mode and submit

Sample Text:

Henry Moore

✓ **Fill up the blanks**

- a) _____ is used for firing clay.
 b) Hollow built, dried and fired clay is called _____

✓ **Name the following**

- ❖ Name 4 different types of kiln
- ❖ Name 5 Power tools

✓ **Match the following**

A

- Power tool
- Henry Moore
- Fired clay
- Hand tool
- Sculpture Medium

B

- Terracotta
- Chisel
- Earth
- Clay
- Drilling Machine

✓ **Fill the table**

Sl No	Work	Year
1	Mother and child	1880
2	Family	1789
3	Falling warrior	1608



Sample Quiz _____ Max: 10 marks



1. Name this toolbar
2. Name the screen you get after loading MS WORD
- 3.



4. _____ shows list of pages in the publication
5. Layout in _____ applies to all pages in the document.

NOTE: Students should be provided with least set of 5 questions to choose from at random. If they want to change the question, they can do so with a 10% penalty in total marks in each case. Program output will not be the sole criteria for assessment. Debugging and logical opportunity will be extended to students even if they do not complete programming tasks successfully. In short, every opportunity must be given to the student to express his knowledge and skills.

NB: Both MS Office and Open Office tools shall be familiarized. The student may opt to do the semester examination using either of these tools depending on availability.

Semester V

Total Marks 600

Subject Code and Name	IA Max.	ESE Max.	ESE Min. Pass	Total Marks	Min. Pass
501 Communicative English III	25	75	30	100	50
502 OOPs Using C++	25	75	30	100	50
503 Operating System II	25	75	30	100	50
504 PC Software II Lab	25	75	30	100	50
505 OOPs Lab	25	75	30	100	50
506 Operating System II Lab	25	75	30	100	50

501 - COMMUNICATIVE ENGLISH III

=====

1. AIM:

- 1) To build a basic vocabulary of a minimum of 500 words.
- 2) To teach some grammatical structures.
- 3) To enhance the student's ability to read and write the English used in daily life.
- 4) To familiarize students to write in academic, social and work related situations.

2. OBJECTIVES:

On completion of this course, the students should be able to

- Understand the use of English in everyday life.
- Respond to communication in English in different contexts.

3. SYLLABUS:

MODULE I:

PROSE: 1 CHAPTER

Conjunction, Preposition, Sentence pattern, Tenses – All forms.

COMPLEMENT: Definition, uses, patterns, S+V+C, S+ to be +C, ACTIVE AND PASSIVE VOICE

MODULE II:

PROSE: 1 CHAPTER

Sequencing of sentences /events, forming sensible sentences, Spot the errors, Dialogue construction, Preposition, Conjunction

MODULE III:

PROSE: 1 CHAPTER

Negative sentence, Phrase and Clause, Comprehension Passage, Outline story, Paragraph writing

MODULE IV:

Question Tags - Definition, uses, general rules regarding usage, forming sensible sentences.

QUESTIONS: Types, Wh Questions, Yes/No Questions, FRAMING QUESTIONS

RELATIVE PRONOUNS: Use of who, whose, which, that, omission of relative pronouns.

MODULE V:

LETTER WRITING: Company correspondence, trade enquiry and reply , orders, execution and cancellations , complaints etc.

4. REFERENCES

4.1 Core Reference

Raymond Murphy, Essential Grammar in use(2nd edition) , ISBN-13 978-0-521
Cambridge Uni press 133393-7

Raymond Murphy, Essential Grammar in use(3rd edition) , ISBN-13 978-0-521
Cambridge Uni press 133393-7

Wren and Martin , High school English Grammar and Composition

S.Chand and CompanyLtd. ISBN:81-219-2197-X Rs:215

4.2 Additional References

Improve your child's grammar level (1-5) Martin Gilmartin

Cescent News (K.L) SDN.BHD

IELTS &TOEFL Made Easy

George John B-Ghud

4.3 Internet Resources

www.englishpage.com

www.englishgrammar101.com

www.ego4u.com

www.usingenglish.com

www.grammarbook.com

www.learn4good.com

www.englishclub.com

5. NOTE ON CURRICULAR TRANSACTIONS

Language teaching to normal children is based on pedagogies reliant on speaking and listening. It is fruitless to use such techniques with HI children. These facts shape our choice of materials, our teaching methodologies and our methods of testing. Even our aims and objectives are different for the differently abled. The syllabus, the materials chosen and teaching and testing methods all reflect this. An appreciation of this essential difference is imperative to the success of any attempt to frame a syllabus for differently abled children. We can use special communication methods like Sign language, Gestures, lip reading, speech, writing etc. Innovative teaching techniques should be used in view of the severe communication problems of the hearing impaired students. Use of visual media, mainly computers, smart boards will also be extensively used as an effective teaching aid.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- i) A Quiz with 40% weightage,
- ii) An Assignment with 20% weightage and
- iii) A Test paper with 40% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be of mostly of multiple choice types.

6.1.2. Assignment

The assignment should consist of carefully chosen activities where students can refer internet or the notes given. All assignments should be preceded by assessment guidelines and submission policy. It should contain sufficient guidelines on the effort expected from the students.

6.1.3. Test

Special consideration is to be given even to the mode of written examination. Considering the students inadequate language ability due to their particular handicap, there is no meaning in testing their writing skills. Essay type questions shall be avoided. Instead more problems for working out shall be given. More of multiple choice questions and fill up the blank type questions has to be given. The special lecture notes prepared according to the syllabus by experts should be used as reference. This could be of the same pattern as the End Semester question paper.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration.

Sample Questions

- I. Change the Voice.
 - a) Sita loves Savitri.
 - b) The mason is building the wall.
 - c) The peon opened the gate.
 - d) He will finish the work in a week.
 - e) The cat killed the mouse.
- II. Add suitable question tags
 - a) You have eaten
 - b) They are in the library.

- c) Lisa likes fruits.
- d) He was a teacher.
- e) **She didn't answer all the questions.**

III. Make questions to get the underlined words as answers.

- a) I am 20 years old.
- b) Yes, I have a sister.
- c) This is my car.
- d) My father is a doctor.
- e) My mother gave me this pen.

IV. Write a letter to the railway company, complaining that your furniture has been damaged in transit, and claiming damages

502. OOPs USING C++

1. AIM:

To introduce the student to the basic concepts of object orientation and impart skills in an industry standard object oriented language

2. OBJECTIVES:

On the completion of this course the student will be able to

- Understand the concepts of classes and object
- Define classes for a given situation and instantiate objects for specific problem solving
- Reuse available classes after modifications if possible
- Possess skill in object oriented thought process

3. SYLLABUS:

Module I:

Introduction to OOP, features of OOP, Classes and objects, Advantages of OOPs, Difference between C and C++; Input and output streams in C++; Basic data types and declarations.

Control & Decision statements-if, else-if, switch, conditional operator, Goto, Decision making statements-Do, while, for, Concepts of Arrays, Review of Functions-function overloading.

Module II:

Class-syntax, member functions and variables, objects, structure and class: comparison, public, private variables and functions, Object arrays, Constructor, destructor, passing objects as arguments

Module III:

Polymorphism – Constructor overloading, Inheritance-Concept of parent and child classes, different types of inheritances- public and private inheritance, Multiple inheritance, Comparison new and delete operators

Module IV:

Friend functions, friend class, pointers, this pointer, Virtual functions, abstract classes, File stream classes in C++-writing strings, reading strings, writing objects, reading objects, exception handling

4. REFERENCES

4.1. Core References

D Ravichandran, Programming with C++, Tata McGraw Hill Pvt Ltd

R S Salaria, Object Oriented Programming using C++, Khanna Book Publish Co (Pvt) Ltd.

RadhaGanesan, Programming with C++, Scitech Publications (India) Pvt. Ltd

Mike McGrath, C++ Programming in easy steps, DreamTech Press

4.2. Additional References

Debarishjana, C++ and Object Oriented Programming Paradigm, PHI learning Pvt Ltd

Robert Lafore, Object Oriented Programming in C++, Waite Group, Inc.

4.3. Internet resources

<http://www.cplusplus.com/doc/tutorial>

<http://www.functionx.com/cpp>

<http://www.learncpp.com>

<http://www.cprogramming.com/tutorial.html>

<http://cplusplus.about.com/od/learning1/a/cpputorial.htm>

5. NOTE ON CURRICULAR TRANSACTIONS

Before introducing class concept, the programming concepts that were used in course 404 should be revised. Make initial programs as simple as possible. The concept of class could be developed from structures in C and should be introduced as a way of keeping related data and methods together for convenience. Please note that the lab course 505 and this course are mutually supporting. This course is meant to make the concepts clear before attempting the lab course 505. Special communication methods like Indian Sign Language, gestures, lip reading, speech, writing etc. can be used. Advanced Technologies like Smart Boards can be used to give visual idea.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- i) A Quiz with 40% weightage,
- ii) An Assignment with 20% weightage and
- iii) A Test paper with 40% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be mostly of multiple choice types and shall contain both concepts and program analysis.

6.1.2. Assignment

The assignment should consist of carefully chosen activities where students can refer internet or the notes given. All assignments should be preceded by assessment guidelines and submission policy. It should contain sufficient guidelines on the effort expected from the students.

6.1.3. Test

Special consideration is to be given even to the mode of written examination. Considering the students inadequate language ability due to their particular handicap, there is no meaning in testing their writing skills. Essay type questions shall be avoided. Even short answer questions should be limited to two or three sentences. More of multiple choice questions and fill up the blank type questions has to be given. The special lecture notes prepared according to the syllabus by experts should be used as reference. This test paper could be of the same pattern as the End Semester question paper.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration.

SAMPLE QUESTIONS

Fill in the blanks

1. Consider the declaration
class exam: private mark, public details
Here class _____ is derived from class _____ and class _____.
2. A class is a collection of variables and _____.
3. Deriving a new class from more than one class is called _____.

Choose the correct answer

1. Consider the following piece of code and choose the correct answer
int x=5,y=3,z;
a=addition(x,y)
a)The function addition is called by passing the values
b) The function addition is called by passing reference
c) Both a & b are correct

State whether TRUE or False

1. There can be only one constructor in a class.
2. In a program, there can be more than one class.

Consider the program and the answer the questions given below

```
# include <iostream.h>
class A
{
protected:
    int x;
void accept()
    {
        x=2;
    }
public:
    void display()
    {
        cout<<"Welcome";
    }
};
class B
{
protected :
    int y;
};
class C: public A,public B
{
public:
    void add()
    {
        accept();
        x=x+5;
        y=20;
        cout<<x+y;
    }
};
void main()
{
    C obj;
    A tmp;
    tmp.display();
    obj.add();
}
```

1. Which are the protected variables?
2. Is the function add () is accessible in main function?
3. Which type of inheritance is used in the above program?
4. What is the output of the program?

Answer the following

1. What is Multiple Inheritance? Give example
2. What is the difference between private inheritance and public inheritance?
Give example
3. What are the features of OOP?
4. What is function overloading? Give Example

5. What is the difference between a constructor and a destructor?

Write the following programs (Any one)

- 1 Using constructor overloading find the sum of two numbers and average of 3 numbers. Using destructor display the message "The End ".
2. Write a program to accept productid, productname, and quantity and unit price of 3 products. Find the total cost of each product and display them with details. Use object array.

Write the output of the following program. If there is an error, write the reason for that error?

```
# include <iostream.h>
class base
{
    public :
    int y;

    base()
    {
        cout<<"hello"<<endl;
    }
};
class deriv: public base
{
public:
    deriv()
    {
        a=5;
        int b=4;
        cout<<a*b<<endl;
    }
    ~deriv()
    {
        cout<<"Program End"<<endl;
    }
};
void main()
{
    derivobj;
}
```


503 - LINUX OPERATING SYSTEM

=====

1. AIM:

This course helps the student to be productive in using and customizing Linux operating system for common command line processes and desktop productivity roles, and who is ready to learn system administration

2. OBJECTIVES:

- Linux basics and Linux(Ubuntu) installation
- Understand the Linux file system
- Perform common file maintenance
- Use and customize the GNOME interface
- Issue essential Linux commands from the command line
- Perform common tasks using the GNOME GUI
- Open, edit, and save text documents using the vi editor
- File access permissions
- Customize X Window System
- Regular expression pattern matching and I/O redirection
- Install, upgrade, delete and query packages on your system
- Network utilities for the user
- Power user utilities

3. SYLLABUS:

Module I:

Overview of Linux operating system: Features- Multitasking, Multi-user, Portability, Communication, Security; Comparison of Linux with Microsoft Windows based operating systems, Open source and free source software, Distributions of Linux. Installation: Hardware Considerations, disk partitioning, System configuration, accounts, Essentials: shell, command line, Getting Started: Logging in and out, Workstations : Linux Desktops, Gnome and KDE, Running applications , The terminal window, shells, command line format , Help Screens and Manual pages, The X-Window system.

Module II:

Filenames and pathnames, wildcards, the file system tree, Links to files , Directories; Manipulating, listing , Access permissions (chmod) , File manipulation (cp, mv, rm etc), X-Window File Managers , Viewing files (more, cat, etc.), Editors : Simple use of vi , Window based editors (gEdit)

Module III:

Linux applications – GIMP, Open Office: Writer, Calc, Impress, Draw, etc

Linux Utilities : The find command , Mail programs , Pattern extractors (grep, cut, diff) , Backup / Archiving with tar , The ftp file transfer program, I/O Redirection : Principles, importance , Pipes & Filters, Processes : Concepts , Creating background processes, Job Control , Process Status (ps), Killing Processes

Module IV:

Basic System Admin. : Overview, Responsibilities, The Super User Account, System Administration Tools, System Logs, Managing Users, The passwd command, Processes : Overview, listing with ps, killing with kill, Startup and Shutdown : System Startup, Run Levels , The inittab and rc files, checking tools , System Shutdown, Clocks : Dates, Times and Time zones , The cron clock daemon, Disks and File Systems : Partitioning, mounting, structure , checking with fsck, df, quot , Backing up with tar, cpio , Package Management , Linux Network Configuration & network aware commands

4. REFERENCES:

4.1. Core References

Beginning Ubuntu Linux From Novice to Professional By Keir Thomas and Andy Chappelle with Jaime Sicam Publisher: Apres

Linux all in one for Dummies By Emmett Dulaney Publisher: Wiley

Linux in a nut shell By Ellen Siever, Stephen Figgins, Robert Love, Arnold Robbins Publisher: O'reilly

4.2. Internet resources

<https://help.ubuntu.com/>

<http://www.debian.org/doc/>

<http://wiki.linux.edu/>

5. NOTE ON CURRICULAR TRANSACTIONS

Innovative teaching techniques should be used in view of the severe communication problems of the hearing impaired students. Teaching in class rooms is through speech, writing, lip reading, signs and gestures. Use of visual media, mainly computers, will also be extensively used as an effective teaching aid.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- i) A Quiz with 40% weightage,
- ii) An Assignment with 20% weightage and
- iii) A Test paper with 40% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be mostly of multiple choice types and shall contain both concepts and program analysis.

6.1.2. Assignment

The assignment should consist of carefully chosen activities where students can refer internet or the notes given. All assignments should be preceded by assessment guidelines and submission policy. It should contain sufficient guidelines on the effort expected from the students.

6.1.3. Test

Special consideration is to be given even to the mode of written examination. Considering the students inadequate language ability due to their particular handicap, there is no meaning in testing their writing skills. Essay type questions shall be avoided. Even short answer questions should be limited to two or three sentences. More of multiple choice questions and fill up the blank type questions has to be given. The special lecture notes prepared according to the syllabus by experts should be used as reference. This test paper could be of the same pattern as the End Semester question paper.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration.

504 - PC SOFTWARE II – LAB

=====

1. AIM:

To gain hands on knowledge in standard application software and its utilities.

2. OBJECTIVES:

After the completion of this course, the student should be able to

- Use a standard spreadsheet processing package exploiting popular features.
- Use a standard presentation package exploiting popular features.
- Use a standard database package exploiting popular features.

3. SYLLABUS:

SPREADSHEET: Creating a Workbook: Entering of data: text, value, formula; Work in cells and ranges: Copying data, Deleting data, Formatting data ; Undo; Use of short cut menu; Entering data automatically, Modifying data; Insert cells; Tabulation; Graph; plotting; Spreadsheet application using formulas; Sorting, Filter

PRESENTATION SOFTWARE : Introduction: Presentation, Slide, Slideshow; Starting PowerPoint, First Screen, Changing Font, font size, moving frame and inserting Clip Art, Inserting Picture, Inserting New Slide, Copying picture from previous slide, Moving the text, Inserting Text, Sizing Box, Text styling, send to back, Giving Animation effect to presentation, Saving a Presentation, Running a Presentation

DATABASE TOOLS: Introduction - DBMS, Table, Records, Fields, Primary Key, Database design; Tables, Datasheet view, Design view, Adding records, Modifying Table design - Inserting fields, Renaming fields, Deleting fields, Moving Fields, Navigating datasheets, Sorting and filtering data, Query Basics - Introduction to SQL, Creating a query - Query wizard, Design view, Form Basics - Creating form, Using form window, Reports - Creating reports with Autoreport

NB: MS Office or Open Office tools shall be familiarized according to availability. The student may opt to do the semester examination using either of these tools depending on availability.

The laboratory work will consist of 10-15 experiments

1. SPREADSHEET - Creating a Workbook: Entering of data: text, value, formula; Work in cells and ranges

2. SPREADSHEET - Copying data, Deleting data, Formatting data ; Undo; Use of short cut menu; Entering data automatically, Modifying data
3. SPREADSHEET -Insert cells; Tabulation; Graph; plotting; Spreadsheet application using formulas; Sorting, Filter
4. PRESENTATION- Introduction: Presentation, Slide, Slideshow; Starting PowerPoint, First Screen, Changing Font, font size, moving frame and inserting Clip Art, Inserting Picture
5. PRESENTATION - Inserting New Slide, Copying picture from previous slide, Moving the text, Inserting Text, Sizing Box, Text styling, send to back
6. PRESENTATION - Giving Animation effect to presentation, Saving a Presentation, Running a Presentation
8. DATABASE - Introduction - DBMS, Table, Records, Fields, Primary Key, Database design;
9. DATABASE – Table Design
10. DATABASE - Datasheet view, Design view, Adding records, Modifying Table design – Inserting fields, Renaming fields, Deleting fields, Moving Fields, Navigating datasheets
11. DATABASE - Query Basics - Introduction to SQL, Creating a query – Query wizard, Design view
12. DATABASE - Form Basics - Creating form, Using form window
13. DATABASE - Reports – Creating reports with Auto report

4. REFERENCES:

4.1 Core References

Learning MS OFFICE 2007 - Ramesh Bangia

Learning MS EXCEL 2007 - Ramesh Bangia

Learning MS POWERPOINT 2007 - Ramesh Bangia

Learning MS ACCESS 2007 - Ramesh Bangia

4.2 Internet resources

<http://www.baycongroup.com/e10.htm>

<http://www.baycongroup.com/access2007/index.html>

<http://www.baycongroup.com/powerpoint2007/index.htm>

<http://www.gcflearnfree.org/office2007>

5. NOTE ON CURRICULAR TRANSACTIONS:

Students should be presented with 5-10 questions for each experiment where they should guess the outcome of a modification in the program and then test it out and discuss the results. Students shall be given handouts for each exercise.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- x) A Quiz with 40% weightage,
- xi) A Test with 40% weightage and
- xii) Lab Record with 20% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be mostly of multiple choice types.

6.1.2. Test

The test shall consist of an assigned task which the students shall perform on the computer.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration. The End Semester Assessment shall be based on the following:

- i) 70% for successful conduct of assigned tasks/experiments
- ii) 15% for a Quiz
- iii) 15% for Lab Record

Sample Quiz:

1. Name the database object used to get information from tables.
2. Name the database management software in MS Office.
3. The _____key is used to uniquely identify a record.
4. _____is the database object used to input data or view data
5. Name the data type in MS Access used to input string or character names.
6. Another name for rows in MS Access is _____
7. Large text values can be stored in _____ data type.
8. _____ is the database object used to print data information
9. Name the database management software in OpenOffice.org.
10. Fields are also called _____in MS Access

NOTE: Students should be provided with least set of 5 questions to choose from at random. If they want to change the question, they can do so with a 10% penalty in total marks in each case. Program output will not be the sole criteria for assessment. Debugging and logical opportunity will be extended to students even if they do not complete programming tasks successfully. In short, every opportunity must be given to the student to express his knowledge and skills.

505. OOPs Lab

1. AIM:

To provide an opportunity for hands-on practice of object oriented programming and problem solving in an industry-standard programming language and also hands-on practice in various algorithms and OO concepts.

2. OBJECTIVES:

This course will provide hands-on practice in the following topics, under a variety of programming situations with a focus on writing, debugging and analyzing object oriented programs.

- Basic data types and concepts in C++
- Managing classes and objects in a variety of situations
- Solving moderately complex problems involving the above concepts

3. SYLLABUS:

1. Testing out and interpreting a variety of simple programs to introduce input / output operations in C++.
2. Various programs to refresh the control branching and looping
3. Programs with various types of functions- call by value and call by reference, returning function results, functions with no return
4. Programs to familiarize with Function Overloading
5. Simple programs to introduce class concepts
6. Solving problems using (i) structures and (ii) classes and comparison between the two.
7. Class definitions and usage involving variety of constructors and destructors
8. Programs involving passing objects as arguments
9. Programs to demonstrate constructor overloading
10. Simple programs to introduce inheritance
11. Programs involving various types of inheritance- Private, Public and Multiple
12. Programs involving friend class and friend functions
13. Simple Programs with pointers
14. Simple programs with virtual functions & abstract classes
15. Exception handling
16. Simple programs involving pointers
17. Programs involving file stream classes

4. REFERENCES:

4.1. Core References

D Ravichandran, Programming with C++, Tata McGraw Hill Pvt Ltd

R S Salaria, Object Oriented Programming using C++, Khanna Book Publish Co (Pvt) Ltd.

RadhaGanesan, Programming with C++, Scitech Publications (India) Pvt. Ltd

Mike McGrath, C++ Programming in easy steps, DreamTech Press

4.2. Additional References

Debarishjana, C++ and Object Oriented Programming Paradigm, PHI learning Pvt Ltd

Robert Lafore, Object Oriented Programming in C++, Waite Group, Inc.

4.3. Internet resources

<http://www.cplusplus.com/doc/tutorial>

<http://www.functionx.com/cpp>

<http://www.learncpp.com>

<http://www.cprogramming.com/tutorial.html>

<http://cplusplus.about.com/od/learning1/a/cpputorial.htm>

5. NOTE ON CURRICULAR TRANSACTIONS:

Students should be presented with 5-10 questions for each experiment where they should guess the outcome of a modification in the program and then test it out and discuss the results. Innovative teaching techniques should be used in view of the severe communication problems of the hearing impaired students. Use of visual media, mainly computers, will also be extensively used as an effective teaching aid.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

1. A Quiz with 40% weightage,
2. A Test with 40% weightage and
3. Lab Record with 20% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be mostly of multiple choice types.

6.1.2. Test

The test shall consist of an assigned task which the students shall perform on the computer.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration. The End Semester Assessment shall be based on the following:

1. 70% for successful conduct of assigned tasks/experiments
2. 15% for a Quiz
3. 15% for Lab Record

NOTE: Students should be provided with least set of 3 questions to choose from at random. If they want to change the question, they can do so with a 10% penalty in total marks in each case. Program output will not be the sole criteria for assessment. Debugging and logical opportunity will be extended to students even if they do not complete programming tasks successfully. In short, every opportunity must be given to the student to express his knowledge and skills.

506 - OPERATING SYSTEM II – LAB

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1. AIM:

This course helps the student to be productive in using and customizing Linux operating system for common command line processes and desktop productivity roles, and who is ready to learn system administration

2. OBJECTIVES:

- Linux basics and Linux(Ubuntu) installation
- Understand the Linux file system
- Perform common file maintenance
- Use and customize the GNOME interface
- Issue essential Linux commands from the command line
- Perform common tasks using the GNOME GUI
- Open, edit, and save text documents using the vi editor
- File access permissions
- Customize X Window System
- Regular expression pattern matching and I/O redirection
- Install, upgrade, delete and query packages on your system
- Network utilities for the user
- Power user utilities

3. SYLLABUS:

LINUX:

Overview of Linux operating system: Features - Multitasking, Multi-user, Portability, Communication, Security; Comparison of Linux with Microsoft Windows based operating systems, Open source and free source software, Distributions of Linux.

Installation: Hardware considerations, Disk partitioning, System configuration, accounts etc

Linux Desktops, Gnome and KDE, Running applications, The terminal window, shells, Command line, Logging in and out, Help Screens and Manual pages.

Linux applications – GIMP, Open office: Writer, Calc, Impress, Draw, etc

Files : Filenames and Pathnames, wildcards, the file system tree, Links to files , Directories; Manipulating, Listing, Access permissions (chmod), File manipulation (cp, mv, rm etc.), X-Window File Managers, Viewing files (more, cat, etc.), Piping, redirecting, Informational commands,

Editors: Simple use of vi , Window based editor gEdit

Linux Utilities : The find command Pattern extractors (grep, cut, diff) , Backup / Archiving with tar, Mail programs ,
Basic System Admin. : The Super User Account, System Administration Tools, System Logs, Package Management.
Processes : listing with ps, killing with kill
Clocks : Dates, Times and Time zones
Linux Network Configuration & network aware commands
Disks and File Systems : Partitioning, mounting, structure , checking with fsck, df, quot

4. REFERENCES:

4.1. Core References

Beginning Ubuntu Linux From Novice to Professional By Keir Thomas and Andy Channelle with Jaime Sicam Publisher: Apres
Linux all in one for Dummies By Emmett Dulaney Publisher: Wiley
Linux in a nut shell By Ellen Siever, Stephen Figgins, Robert Love, Arnold Robbins Publisher: O'reilly

4.2. Internet resources

<https://help.ubuntu.com/>
<http://www.debian.org/doc/>
<http://wiki.linux.edu/>

5. NOTE ON CURRICULAR TRANSACTIONS:

Innovative teaching techniques should be used in view of the severe communication problems of the hearing impaired students. Teaching in class rooms is through total communication (which includes speech, writing, lip reading, signs and gestures). Use of visual media, mainly computers, will also be extensively used as an effective teaching aid.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- i. A Quiz with 40% weightage,
- ii. A Test with 40% weightage and
- iii. Lab Record with 20% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be mostly of multiple choice types.

6.1.2. Test

The test shall consist of an assigned task which the students shall perform on the computer.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration. The End Semester Assessment shall be based on the following:

- i. 70% for successful conduct of assigned tasks/experiments
- ii. 15% for a Quiz
- iii. 15% for Lab Record

Semester VI

Total Marks 600

Subject Code and Name	IA Max.	ESE Max.	ESE Min. Pass	Total Marks	Min. Pass
601 Communicative English IV	25	75	30	100	50
602 RDBMS	25	75	30	100	50
603 .NET Programming	25	75	30	100	50
604 RDBMS Lab	25	75	30	100	50
605 .NET Lab	25	75	30	100	50
606 Computer Graphics I - Lab	25	75	30	100	50

601 - COMMUNICATIVE ENGLISH IV

=====

1. AIM:

- To build a basic vocabulary of a minimum of 500 words.
- To teach some grammatical structures.
- To enhance **the student's ability to read and write the English used in daily life.**
- To familiarize students to write in academic, social and work related situations.

2. OBJECTIVES:

On completion of this course, the students should be able to

- Understand the use of English in everyday life.
- Respond to communication in English in different contexts.

3. SYLLABUS:

MODULE I:

PROSE : 1 CHAPTER

TENSES : All forms (Revision)

DIRECT AND INDIRECT SPEECH: Statements, questions, imperatives, exclamations.

GERUND: Definition, uses, patterns, S+V+ Gerund, Gerund+ to be+C,

INFINITIVE : Definition , uses , changing gerund into infinitive , different patterns

MODULE II:

PROSE: 1 CHAPTER

DEGREES OF COMPARISON: Positive, Comparative, Superlative, change the degrees of comparison.

TYPES OF SENTENCES: Simple, compound, complex, Definition

TRANSFORMATION OF SENTENCES: Interchange of simple, compound and complex sentences,

COMPREHENSION PASSAGES

MODULE III:

PROSE: 1 CHAPTER; PARAGRAPH WRITING; OUTLINE STORY

MODULE IV:

LETTER WRITING: BUSINESS AND OFFICIAL LETTERS, APPLICATION FOR JOB:

Preparing resume, SENTENCE ORDER, FORM SENSIBLE SENTENCES

4. REFERENCES:

4.1. Core References

Raymond Murphy, Essential Grammar in use(2nd edition) , ISBN-13 978-0-521
Cambridge Uni press 133393-7

Raymond Murphy, Essential Grammar in use(3rd edition) , ISBN-13 978-0-521
Cambridge Uni press 133393-7

Wren and Martin , High school English Grammar and Composition

S.Chand and CompanyLtd. ISBN: 81-219-2197-X Rs:215

4.2. Additional References

Improve your child's grammar level (1-5) Martin Gilmartin Cescent News (K.L)
SDN.BHD

IELTS &TOEFL Made Easy, George John B-Ghud

4.3. Internet Resources

www.englishpage.com

www.englishgrammar101.com

www.ego4u.com

www.usingenglish.com

www.grammarbook.com

www.learn4good.com

www.englishclub.com

5. NOTE ON CURRICULAR TRANSACTIONS

Language teaching to normal children is based on pedagogies reliant on speaking and listening. It is fruitless to use such techniques with HI children. These facts shape our choice of materials, our teaching methodologies and our methods of testing. Even our aims and objectives are different for the differently abled. The syllabus, the materials chosen and teaching and testing methods all reflect this. An appreciation of this essential difference is imperative to the success of any attempt to frame a syllabus for differently abled children. We can use special communication methods like Sign language, Gestures, lip reading, speech, writing etc. Innovative teaching techniques should be used in view of the severe communication problems of the hearing impaired students. Use of visual media, mainly computers, smart boards will also be extensively used as an effective teaching aid.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- i) A Quiz with 40% weightage,
- ii) An Assignment with 20% weightage and
- iii) A Test paper with 40% weightage.

6.1.2. Assignment:

The assignment should consist of carefully chosen activities where students can refer internet or the notes given. All assignments should be preceded by assessment guidelines and submission policy. It should contain sufficient guidelines on the effort expected from the students.

6.1.3. Test:

Special consideration is to be given even to the mode of written examination. Considering the students inadequate language ability due to their particular handicap, there is no meaning in testing their writing skills. Essay type questions shall be avoided. Even short answer questions should be limited to two or three sentences. More of multiple choice questions and fill up the blank type questions has to be given. The special lecture notes prepared according to the syllabus by experts should be used as reference. This test paper could be of the same pattern as the End Semester question paper.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration.

SAMPLE QUESTIONS

- I. Turn the following into indirect speech.
 - a) He said to me" I have often told you not to play with fire"
 - b) "What do you want?" He said to her.
 - c) "Are you coming home with me?" the boy asked.
 - d) "Do you really come from China?"said the prince.
 - e) The poor man exclaimed," Will none of you help me"?
- II. Change the following into Compound Sentences.
 - a) It is too heavy to lift.
 - b) Being clever she is happy.
 - c) As she is clever, she is happy.
 - d) When he went to school, the school was closed.

III. Classify the following sentences into simple, compound and complex.

- a) As he works hard, he became rich.
- b) Though he practiced dance, she become famous.
- c) Though she is rich, she is simple.
- d) I went home and I took rest.
- e) She was active, so everyone liked her.

IV. Develop the outline story

Ant fell water..... Dovetree nearby seesthis.....drops into a leaf..... To help it..... Another day..... Hunter aims..... arrow..... ant.....bites.....dovesaved

602 - RDBMS

=====

1. AIM:

To introduce basic concepts of databases and related techniques and tools

2. OBJECTIVES:

- Make aware of basic concepts of databases and data base management systems
- Make aware of concepts of relational data bases.
- Develop skills to write database queries
- Develop understanding of backend

3. SYLLABUS:

Module I:

Data, Tables, Databases, Importance of data, Database Management System (DBMS), Concepts of DBMS, Different types of DBMS and Advantages of databases; RDBMS- What is RDBMS, Relational Model, Relation between tables, ORACLE as RDBMS

Module II:

Data Definition in SQL: Data types, creation, Insertion, viewing, updation, deletion of tables, modifying the structure of tables, renaming, dropping of tables. Data constraints- I/O constraints- Primary key, foreign key, Unique key constraints. Business rule constraints- Null, not null, check integrity constraints, Defining different constraints on table, ALTER TABLE Command.

Module III:

Database Manipulation in SQL: Computations done on table data - Select command, Logical operators, Range searching, Pattern matching, Grouping data from tables in SQL, GROUP BY, HAVING clauses, Subquery, Joins - Joining Multiple Tables, Joining a Table to itself, creating a table from another table, Joins

Module IV:

Introduction – Views: Creation, Renaming the column of a view, destroying view. PL\SQL –Introduction, stored procedures, stored functions

4. REFERENCES:

4.1. Core References

Raghu Ramakrishnan, Johannes Gehrke, Database Management Systems, McGraw-Hill

Alex Leon, Mathews Leon, SQL- A complete reference, McGraw-Hill

4.2. Additional References

Sumathi-Esakkirajan, Fundamentals of RDBMS, Springer Pvt. Ltd

4.3. Internet resources

<http://www.help2engg.com/dbms/dbms-introduction>

<http://www.roseindia.net/databases/>

<http://www.w3schools.com/sql/default.asp>

<http://www.sql-tutorial.net/>

<http://sqlzoo.net/>

5. NOTE ON CURRICULAR TRANSACTIONS:

Please note that the lab course 604 and this course are mutually supporting. This course is meant to make the concepts clear before attempting the lab course 604. Special communication methods like Sign Language, gestures, lip reading, speech, writing etc. can be used. Advanced Technologies like Smart Boards can be used to give visual idea.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- i) A Quiz with 40% weightage,
- ii) An Assignment with 20% weightage and
- iii) A Test with 40% weightage.

6.1.2. Assignment

The assignment should consist of carefully chosen activities where students can refer internet or the notes given. All assignments should be preceded by assessment guidelines and submission policy. It should contain sufficient guidelines on the effort expected from the students.

6.1.3. Test

Special consideration is to be given even to the mode of written examination. Considering the students inadequate language ability due to their particular handicap, there is no meaning in testing their writing skills. Essay type questions shall be avoided. Even short answer questions should be limited to two or three sentences. More of multiple choice questions and fill up the blank type questions has to be given. The special lecture notes prepared according to the syllabus by

experts should be used as reference. This test paper could be of the same pattern as the End Semester question paper.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration.

6.5 SAMPLE QUESTIONS

Choose the correct answer

1. To change the name of a table _____ SQL statement is used.
(a) Delete (b) Alter (c) Drop
2. The full form of DDL is _____.
(a) Data Definition Language (b) Data Declaration Language (c) Direct Definition language

State whether the following statements are true or false.

1. Number data type is used to store integers and reals.
2. The SELECT statement is used to store data in a database.
3. UPDATE TABLE is a DDL statement.

Fill in the blanks.

1. The _____ function gives the current system date.
2. _____ data type is used for storing variable length character data.
3. The operator 'AND' is an example for _____ operator.

What are the syntax of the SQL statements used to.

1. Create a table
2. Deleting a table

Answer the following (Choice to be given)

1. What are the advantages of RDBMS?
2. Write the difference between UPDATE and INSERT INTO SQL Statements

Write SQL commands for the following

- a) **To make a new table named 'Bank_tb'. It should have the following fields:**
Account no, Customer Name, Address, Email, Balance, Phone
Balance is numeric data field. All other fields are string data fields
- b) Give the following data to the table:
 - i) Account no - A6012
Customer Name - Aravind K.L
Address -KRA31,SNHouse,WestHills,Kozhikode
Email -aravind@yahoo.com
Balance -6700000
Phone -9448447676
- c) Change the balance to 750000 of customer with account no A8022.

Consider the table below

Table: shop_tb

Itemno	Item_name	Category	Brand	Unit_price	Quantity
1	Parle G	Biscuit	Parle	8	500
2	Lays	Snacks	Parle	12	100
3	Diary Milk	Chocolate	Cadburys	15	200
4	Natraj super	Pencil	Natraj	10	200
5	Good Day	Biscuit	Britannia	12	600
6	Eclairs	Chocolate	Nestle	40	300
7	Apsara sharp	Pencil	Apsara	12	450
8	Lays	Snacks	Parle	14	150

Write SQL statement with output to get

1. Brand of all chocolates
2. Details of items whose price is above 15 and quantity less than 300

603 - C#.Net PROGRAMMING

=====

1. AIM:

This course provides an opportunity to learn C# and object-oriented programming in .NET framework by syntax teaching, programming, debugging and object-oriented programming design.

2. OBJECTIVES:

Goals for students in this course are the following

- C# language and object-oriented concepts
- Creating Windows-based applications: Forms and Controls
- Using ADO.NET to access and manipulate database data

3. SYLLABUS:

Module I:

Introduction to C#: Evaluation of C#, characteristics of C#, difference between C++ and C#, difference between Java and C#. Overview of C#: Programming structure of C#, editing, compiling and executing C# programs, namespace, comments, using aliases for namespace classes, using command line argument, maths function. boxing and unboxing. Methods in C#: declaring methods, the main method, invoking methods, pass by value, pass by reference, the output parameters, variable arguments list, method overloading. Arrays: 1-D array, creating an array, 2-D array, variable size arrays, the system, array class, array list class.

Module II:

Introduction to C# environment: The .NET strategy, the origins of the .NET technology, the .NET framework, the common language runtime, framework base classes, user and programs interface, visual studio .NET, .NET languages, benefits of the .NET approach, C# and .NET.

Module III:

C# .NET: Classes and Objects ,Object Creation, Passing Values to Classes, Constructors, Inheritance, Method Overloading, operator Overloading, C# Static methods. Windows Forms and Controls: common controls and events.

Module IV:

ADO.NET: Creating Connections, Data Commands & the Data Reader, the Data Adapter, the Dataset, The Data Table, The Data View, Editing & Updating Data.

4. REFERENCES

4.1. Core References

Test Your C# . net Skills: YashavantKanetkar, AsangDani

Professional C#: Christian Nagel, Bill Evjen, Jay Glynn

4.2. Additional References

Programming C# 4.0 6ed : Griffiths

C#.net web developer's guide – Adrian Turttschi, Dot

Thatcom,Jasonwerry,GregHack,JosephAlbahari,SaurabhNandu,Weimeng Lee

C# Programming: Tim Anderson

4.3. Internet Resources

www.csharp-station.com/Tutorial

www.homeandlearn.co.uk/csharp/csharp.html

www.referencedesigner.com/tutorials/csharp/csharp_1.php

<http://www.c-sharpcorner.com/Beginners/>

<http://www.csharptuts.net/ado-net-tutorial-for-beginners/>

5. NOTE ON CURRICULAR TRANSACTIONS:

Students who have completed C Programming and OOPs using C++ successfully will find it very easy. This is a popular object oriented language promoted by Microsoft for the development of GUI (Graphical User Interface) Software.

Innovative teaching techniques should be used in view of the severe communication problems of the hearing impaired students. Teaching in class rooms is through speech, writing, lip reading, signs and gestures. Use of visual media, mainly computers, will also be extensively used as an effective teaching aid.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- i) A Quiz with 40% weightage,
- ii) An Assignment with 20% weightage and
- iii) A Test paper with 40% weightage.

6.1.2. Assignment

The assignment should consist of carefully chosen activities where students can refer internet or the notes given. All assignments should be preceded by assessment guidelines and submission policy. It should contain sufficient guidelines on the effort expected from the students.

6.1.3. Test

Special consideration is to be given even to the mode of written examination. Considering the students inadequate language ability due to their particular handicap, there is no meaning in testing their writing skills. Essay type questions shall be avoided. Even short answer questions should be limited to two or three sentences. More of multiple choice questions and fill up the blank type questions has to be given. The special lecture notes prepared according to the syllabus by experts should be used as reference. This test paper could be of the same pattern as the End Semester question paper.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration.

SAMPLE QUESTIONS

Choose the correct answer

1. ----- constructors are slow in execution?
[a)default b)private c)static d)copy]
2. When we create a console application by default ----- file is included in the application?
[a)program.cs b)default.cs c)project.cs d)form.cs]
3. -----are programmer defined tokens?
[a)goto b)switch c)int d)identifiers]

Fill in the blanks

1. ----- data type can hold fractional part of the whole number
2. Method overriding is implemented by defining a method using ----- keyword in a base class?

State whether TRUE or FALSE

1. Every c# program must have main() method.
2. C#.Net is case insensitive.
3. Private Constructors are available in C#.

Answer all questions in two or three sentences

1. Write about characteristics of abstract method?
2. Write the declaration of interface with example?
3. Write the syntax of for each loop with example?
4. What is meant by instance variables?
5. Write the procedure for creating Windows application?

604 - RDBMS LAB

=====

1. AIM:

This course will provide an opportunity for hands-on practice in the following topics, under a variety of computing situations with a focus on writing and analyzing SQL statements:

- Database design and implementation
- Writing and analyzing SQL statements
- Creating user interface and study the working of a data base in a front end application

2. OBJECTIVES:

This course will provide hands-on practice in writing different SQL statements and analyzing them. Practical situation which uses database is introduced in different exercises. The focus is also given in the working of a database in a front end application.

3. SYLLABUS:

1. SQL Commands – Creating new table and inserting records in the table
2. SQL Commands – Deleting records & tables, updating tables, altering tables
3. SQL Commands – Constraints- (a) Primary Key, (b) Foreign Key (c) Unique, (d) Not Null
4. SQL Commands – SELECT statement with Logical operators and Connectors
5. SQL Commands - SELECT statement with order by, group by and distinct
6. SQL Commands – SELECT statement with Functions (i) String (ii) Number (iii) Date
7. SQL Commands - SubQuery
6. SQL Commands – Joins
7. Creating a table from another table.
8. Views
9. Stored procedures
10. Stored functions
11. Accessing database with Front End tool
12. Creating Data Reports

4. REFERENCES:

4.1. Core References

Raghu Ramakrishnan, Johannes Gehrke, Database Management Systems, McGraw-Hill

Alex Leon, Mathews Leon, SQL- A complete reference, McGraw-Hill

4.2. Additional References

Sumathi-Esakkirajan, Fundamentals of RDBMS, Springer Pvt. Ltd.

4.3. Internet resources

<http://www.help2engg.com/dbms/dbms-introduction>

<http://www.roseindia.net/databases/>

<http://www.w3schools.com/sql/default.asp>

<http://www.sql-tutorial.net/>

<http://sqlzoo.net/>

5. NOTE ON CURRICULAR TRANSACTIONS:

Students should be presented with 5-10 questions for each experiment where they should guess the outcome of a modification in the program and then test it out and discuss the results. Innovative teaching techniques should be used in view of the severe communication problems of the hearing impaired students. Use of visual media, mainly computers, will also be extensively used as an effective teaching aid.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- A Quiz with 40% weightage,
- A Test with 40% weightage and
- Lab Record with 20% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be mostly of multiple choice types.

6.1.2. Test

The test shall consist of an assigned task which the students shall perform on the computer.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration. The End Semester Assessment shall be based on the following:

- 70% for successful conduct of assigned tasks/experiments
- 15% for a Quiz
- 15% for Lab Record

NOTE: Students should be provided with least set of 3 questions to choose from at random. If they want to change the question, they can do so with a 10% penalty in total marks in each case. Program output will not be the sole criteria for assessment. Debugging and logical opportunity will be extended to students even if they do not complete programming tasks successfully. In short, every opportunity must be given to the student to express his knowledge and skills.

605 - C#.Net PROGRAMMING

=====

1. AIM:

To give hands-on exposure to various tools and languages required for technical and creative design of websites.

2. OBJECTIVES:

- To practice moderately complex use of the following languages/backend/technologies.
- This course will provide hands-on practice in the following topics, under a variety of programming situations with a focus on writing, debugging and analysing object oriented programs.

3. SYLLABUS:

The laboratory work will consist of 15-20 experiments

1. Simple programs to demonstrate the syntax and use of the following features of the language: basic data types, operators and control structures.
2. Simple console application programs
3. Introduction to class, objects and methods
4. Simple programs using constructors
5. Program involving method overloading
6. 1-D Arrays: A variety of programs to declare, initialise, read, print and process 1-D arrays of various basic data types. Processing to include, selection, sum, counting, selective sum, selective counting, reversing etc.
7. 2-D Arrays: A variety of programs to declare, initialise, read, print and process 2-D arrays of various basic data types.
8. Programs to introduce Operator overloading
9. Programs to create, debug and run Windows application programs.
10. Simple programs using windows basic controls.
11. ADO.net to save, retrieve records from windows form application.

4. REFERENCES:

4.1 Core References

Test Your C# .net Skills: Yashavant Kanetkar, AsangDani

Professional C#: Christian Nagel, Bill Evjen, Jay Glynn

4.2 Additional References

Programming C# 4.0 6ed: Griffiths

C#.net web developer's guide – Adrian Turtschi, Dot Thatcom, Jasonwerry, GregHack, JosephAlbahari, SaurabhNandu, Weimeng Lee

C# Programming: Tim Anderson

4.3 Internet Resources

www.csharp-station.com/Tutorial

www.homeandlearn.co.uk/csharp/csharp.html

www.referencedesigner.com/tutorials/csharp/csharp_1.php

<http://www.c-sharpcorner.com/Beginners/>

<http://www.csharptuts.net/ado-net-tutorial-for-beginners/>

5. NOTE ON CURRICULAR TRANSACTIONS:

Students should be presented with 5-10 questions for each experiment where they should guess the outcome of a modification in the program and then test it out and discuss the results. Innovative teaching techniques should be used in view of the severe communication problems of the hearing impaired students.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- i) A Quiz with 40% weightage,
- ii) A Test with 40% weightage and
- iii) Lab Record with 20% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be mostly of multiple choice types.

6.1.2. Test

The test shall consist of an assigned task which the students shall perform on the computer.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration. The End Semester Assessment shall be based on the following:

- i) 70% for successful conduct of assigned tasks/experiments
- ii) 15% for a Quiz
- iii) 15% for Lab Record

606 - COMPUTER GRAPHICS I LAB

=====

1. AIM:

To gain hands-on knowledge

- to choose and use the best tools for common image editing jobs including silhouetting, exposure correction, retouching, layering, setting typography, and creating image composites.
- to produce detailed and scalable art for almost any application.

2. OBJECTIVES:

After the completion of unit 1, the student should learn how to:

- Analyze and manipulate the dimensions and resolution of an image.
- Use basic selection tools to silhouette and edit parts of an image.
- Paint images and parts of an image using the Brush tool, blend modes, and gradients.
- Evaluate and correct exposure and contrast problems using histograms and Levels.
- Create composite images that demonstrate advanced selection and layering techniques.
- Set and modify typography using the full range of type tools, the Character panel, and the Paragraph panel.
- Apply special effects to typography using masks, paths, and layer styles.
- Apply filters that enhance the appearance of photos and give images an illustrated or artistic appearance.

After the completion of unit 2, the student should learn how to:

- Work efficiently in the Adobe Illustrator environment with various modes, panels, and settings.
- Use the full range of shape drawing and freehand drawing tools to build illustrations.
- Apply fill and stroke colors to objects created with the drawing tools.
- Develop attractive illustrations using advanced selection, organization, and drawing tools.
- Use the full range of transformation and distortion tools to accurately modify objects' shapes.
- Draw accurate vector objects using the Pen tool and its associated features.

- Use the various type tools, and apply wrap, flow, shape, and path modifications to typography.
- Design an advertisement using appropriate typography, drawing tools, and a clipping mask to contain the art within a shape.
- Align multiple objects with the Align panel and create complex shapes from simple objects with the Pathfinder panel and Shape Builder tool.
- Design a logo using the appropriate tools and features covered throughout the course.

3. SYLLABUS:

UNIT 1:

Lab Sessions to Practice the following features on a selected image editing software

Image Fundamentals, Image size alteration, Cropping an image, Making, saving & modifying Selections, Painting and Filling, Working in Layers, Using text, Editing and Retouching, Blending modes, Adjusting Color and Grayscale, Transforming objects, Enhancing images, Sharpening and softening images, 3D editor, Adding Special effects, Saving and Exporting Images, Creating Web Graphics.

UNIT 2:

Lab Sessions to Practice the following features on a selected vector drawing software

Drawing tools, Selection tools, Painting tools, Reshaping tools, Symbols, Using text, Working in Layers, Blending, 3D Rendering, Adjusting Color, Modifying objects, Perspective control and distortion, Adding effects, Saving and Exporting.

4. REFERENCES:

4.1 Core References

Adobe Creative Team, Adobe Photoshop CS5 Classroom in a Book, Adobe Press,
Adobe Creative Team, Adobe Illustrator CS5 Classroom in a Book, Adobe Press

4.2 Additional References

Lisa Danae Dayley & Brad Dayley, Adobe Photoshop CS5 Bible, Wiley Publications.

Mordy Golding, Real World Adobe Illustrator CS5, **Peachpit Press**

4.3 Internet resources

www.adobe.com/support/photoshop/gettingstarted/
tv.adobe.com/show/learn-photoshop-cs5/

www.photoshopcafe.com/tutorials/
www.photoshopessentials.com
www.adobe.com/support/illustrator/gettingstarted/
tv.adobe.com/show/learn-illustrator-cs5
www.designrfix.com/resources/illustrator-tutorials

5. NOTE ON CURRICULAR TRANSACTIONS:

Innovative teaching techniques should be used in view of the severe communication problems of the hearing impaired students. Since the software can be used for different purposes, many small exercises on each specific topic are included.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- A Quiz with 40% weightage,
- A Test with 40% weightage and
- Lab Record with 20% weightage.

On completion of the Unit 1, the first internal assessment shall be conducted and after the third and fourth module, the second assessment shall be done.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be mostly of multiple choice types.

6.1.2. Test

The test shall consist of an assigned task which the students shall perform on the computer.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration. The End Semester Assessment shall be based on the following:

- 70% for successful conduct of assigned tasks/experiments
- 15% for a Quiz
- 15% for Lab Record

SAMPLE QUESTION - TEST

Part-A: Create an interesting multicolor composition using any one theme (Music/ Sports /Dance) in Photoshop.

- The image size should be 800x600 pixels.
- The image must contain:
 - At least 2 photo images.
 - A Text layer
 - A Gradient
- Make sure the use of pen tool
- You can use the pictures in your exam folder.
- Save the image to the specified exam folder as image.psd and image.jpg

Part-B: Create a business card for your personal imaginary business.

- This must include a logo created specifically for your business.
- Save the design to the specified exam folder as card.ai and card.jpg

SAMPLE QUIZ

Fill in the blanks (1 mark each)

1. _____ tool is used to draw squares and rectangles.
(Rectangle, Ellipse, Star)
2. _____ contains tools for creating and editing images.
(Tool box, Palette, Menu bar)
3. **Adobe Illustrator** is a _____ based computer drawing tool
(Raster, Vector, Pixel)
4. Graphics often combine _____, illustration and colour
(Text, Graphics, Animation)
5. Photoshop is developed and published by _____
(Macromedia, Corel, Adobe)
6. _____ is the file format of Photoshop (doc, gif, psd)
7. Graphic type of Photoshop is _____
(Raster, Vector, Image)
8. Raster graphics is composed of _____
(vectors, lines, pixels)
9. Illustrator is primarily used to create _____.
(Outline art, Collage, Animation)
10. File format of Illustrator is _____.
(* .AI, * .doc, * . PDF)

Semester VII

Total Marks 600

Subject Code and Name	IA Max.	ESE Max.	ESE Min. Pass	Total Marks	Min. Pass
701 Communicative English V	25	75	30	100	50
702 JAVA Programming	25	75	30	100	50
703 Computer Networks	25	75	30	100	50
704 JAVA Programming - Lab	25	75	30	100	50
705 ELECTIVE LAB 1. ASP.NET, MYSQL 2. VB.NET, SQL SERVER 3. MULTIMEDIA	25	75	30	100	50
706 Computer Graphics II Lab	25	75	30	100	50

701 - COMMUNICATIVE ENGLISH V

=====

1. AIM:

- To teach grammatical structures.
- To enhance the student's ability to read and write the English used in daily life.
- To familiarize students to write in academic, social and work related situations.

2. OBJECTIVES:

On completion of this course, the students should be able to

- Understand the use of English in everyday life.
- Respond to communication in English in different contexts.

3. SYLLABUS:

Module I:

Prose : 1 Chapter

Dialogue Construction, Common Errors in English

Module II:

Prose: 1 Chapter

Comprehension Passage

Outline Story

Module III:

Prose: 1 Chapter

Direct, Indirect Speech (Revision)

Active and Passive Voice (Revision)

Module IV:

Prose: 1 Chapter

Letter Writing, Paragraph Writing

4. REFERENCES:

4.1. Core References

Raymond Murphy, Essential Grammar in use(2nd edition) , ISBN-13 978-0-521
Cambridge Uni press 133393-7

Raymond Murphy, Essential Grammar in use(3rd edition) , ISBN-13 978-0-521
Cambridge Uni press 133393-7

Wren and Martin , High school English Grammar and Composition

S.Chand and CompanyLtd. ISBN: 81-219-2197-X Rs:215

4.2. Additional References

Improve your **child's grammar level (1-5)** Martin Gilmartin Cescent News (K.L)
SDN.BHD

IELTS &TOEFL Made Easy, George John B-Ghud

4.3. Internet Resources

www.englishpage.com

www.englishgrammar101.com

www.ego4u.com

www.usingenglish.com

www.grammarbook.com

www.learn4good.com

www.englishclub.com

5. NOTE ON CURRICULAR TRANSACTIONS

Language teaching to normal children is based on pedagogies reliant on speaking and listening. It is fruitless to use such techniques with HI children. These facts shape our choice of materials, our teaching methodologies and our methods of testing. Even our aims and objectives are different for the differently abled. The syllabus, the materials chosen and teaching and testing methods all reflect this. An appreciation of this essential difference is imperative to the success of any attempt to frame a syllabus for differently abled children. We can use special communication methods like Sign language, Gestures, lip reading, speech, writing etc. Innovative teaching techniques should be used in view of the severe communication problems of the hearing impaired students. Use of visual media, mainly computers, smart boards will also be extensively used as an effective teaching aid.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- i) A Quiz with 40% weightage,
- ii) An Assignment with 20% weightage and
- iii) A Test paper with 40% weightage.

6.1.2. Assignment:

The assignment should consist of carefully chosen activities where students can refer internet or the notes given. All assignments should be preceded by assessment guidelines and submission policy. It should contain sufficient guidelines on the effort expected from the students.

6.1.3. Test:

Special consideration is to be given even to the mode of written examination. Considering the students inadequate language ability due to their particular handicap, there is no meaning in testing their writing skills. Essay type questions shall be avoided. Even short answer questions should be limited to two or three sentences. More of multiple choice questions and fill up the blank type questions has to be given. The special lecture notes prepared according to the syllabus by experts should be used as reference. This test paper could be of the same pattern as the End Semester question paper.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration.

SAMPLE QUESTIONS

- I. Turn the following into indirect speech.
 - a) He said to me" I have often told you not to play with fire"
 - b) "What do you want?" He said to her.
 - c) "Are you coming home with me?" the boy asked.
 - d) "Do you really come from China?"said the prince.
 - e) The poor man exclaimed," Will none of you help me"?

- II. Develop the outline story

Ant fell water.... Dovetree nearby seesthis.....drops into a leaf..... To help it..... Another day..... Hunter aims..... arrow..... ant.....bites.....dovesaved

III. Change the Voice.

- a) Sita loves Savitri.
- b) The mason is building the wall.
- c) The peon opened the gate.
- d) He will finish the work in a week.
- e) The cat killed the mouse.

IV. Write a letter to the railway company, complaining that your furniture has been damaged in transit, and claiming damages.

1. AIM:

To provide awareness about programming, programming languages and clear understanding about software development using JAVA programming language.

2. OBJECTIVES:

After the completion of this course, the student should be able to:

- To learn the basics of Java programming
- To learn the concepts of applets, Packages and Interfaces
- To learn the concepts of AWT and Swing

3. SYLLABUS:

Module I:

Introduction, Comparison: Java and C++, Java Programming, introduction to Applets and Applications, Advantages of Java ,Constants, variables and data types, Operators and expressions, Applications: Simple java Programs, java program structure, Decision making and looping, decision making and branching

Module II:

Classes, objects and methods: Introduction, Defining a class, adding methods, Creating objects, accessing class members, Constructors, method overloading, Command line arguments, final variables and Methods, abstract methods and classes

Module III:

Arrays, One dimensional array, Two dimensional arrays, Strings, Interfaces- Multiple Inheritance, Defining interfaces, Extending interfaces, Implementing interfaces, Java API Packages Managing errors and exceptions- try and catch statement, using finally statement

Module IV:

Applets: Introduction, Building Applet code, Applet life cycle, creating executable applet, designing Webpage, Applet tag, adding applet to HTML file, Running the applet.

Graphics: Graphics class, AWT and Swing (Concepts only), buttons, windowed application, images

4. REFERENCES:

4.1. CORE REFERENCES

- E. Balaguruswamy, "Programming in Java", 2nd Edition, TMH Publications
- Peter Norton, "Peter Norton Guide to Java Programming", TechmediaPublications

4.2. ADDITIONAL REFERENCES

- Mastering JAVA2: John Zukowski
- Java Programming : Mike Mcgrath
- Java Second Edition made simple : Pk Mcbride
- Java made simple : Peter Mcbride
- Core Java : R. Nageswara Rao
- **1001 Java programmer's tips** : Mark C. Chan, Steven W. Griffith, Anthony F. Iasi

4.3. INTERNET RESOURCES

- <http://java.about.com/od>
- <http://java.sun.com/docs/books/tutorial/>
- <http://www.leepoint.net/notes-java/index.html>
- <http://math.hws.edu/javanotes/c2/index.html>

5. NOTE ON CURRICULAR TRANSACTIONS:

Innovative teaching techniques should be used in view of the severe communication problems of the hearing impaired students. Teaching in class rooms is through total communication (which includes speech, writing, lip reading, signs and gestures). Use of visual media, mainly computers, will also be extensively used as an effective teaching aid.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- i) A Quiz with 40% weightage,
- ii) An Assignment with 20% weightage and
- iii) A Test paper with 40% weightage.

6.1.2. Assignment

The assignment should consist of carefully chosen activities where students can refer internet or the notes given. All assignments should be preceded by assessment guidelines and submission policy. It should contain sufficient guidelines on the effort expected from the students.

6.1.3. Test

Special consideration is to be given even to the mode of written examination. Considering the students inadequate language ability due to their particular handicap, there is no meaning in testing their writing skills. Essay type questions shall be avoided. Even short answer questions should be limited to two or three

sentences. More of multiple choice questions and fill up the blank type questions has to be given. The special lecture notes prepared according to the syllabus by experts should be used as reference. This test paper could be of the same pattern as the End Semester question paper.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration.

SAMPLE QUESTIONS

I. Choose the correct answer

1. Java is

[a) platform independent b) secure c) All the above]

II. State whether the following statements are true or false

1. Java does not support operator overloading

2. Pointers are used in Java to store the address of a variable.

III. Write the syntax for the following

1. Conditional operator

2. Two dimensional arrays

IV. Answer all questions

1. Write the advantages of java

2. What is constructor?

V. Define the following

1. Documentation section

2. Method overloading

VI. Answer all questions

1. Define a Park class with attributes length, breadth and area. Define a suitable constructor and a method to display the area of a park of length 450 m and breadth 550 m.

2. Write a program to accept two numbers in command line and print the multiples of 3 between them?

703 – COMPUTER NETWORKS

=====

1. AIM:

To introduce computer networks, their structures, techniques as well as some common standards.

2. OBJECTIVES:

On completion of this course student shall

- be aware of evolution of development of networks
- understand the basic transmission technologies and characteristics
- understand the use of layer architecture for networking systems
- understand the main protocols used in local networks

3. SYLLABUS:

Module I:

Introduction to Networks, Need of networks, Requirements of a network; Transmission media- copper wires, Fiber Optics, Wireless Transmission, Radio Transmission, Microwave Transmission, Communication Satellites, Channels for Communication, Modem, Carriers, Modulation, Local asynchronous communication, RS 232, baud rate, framing and errors.

Module II:

Packet transmission, packets, frames and error detection, point to point communication, LAN topologies, Hardware addressing and frame type identification, LAN wiring, NIC.

Module III:

Protocols and layering, ISO 7-layer model (concept only), basic functions of each layer.

Module IV:

IP addressing, scheme and hierarchy, IP Datagram and datagram forwarding, IP encapsulation, IPv6, UDP, TCP (definitions only)

4. REFERENCES:

4.1. CORE REFERENCES

- Computer Networks , A Systems Approach by Larry L Peterson and Bruce S Davie
- Douglas E Comer, Computer Networks and Internets, 4/e, Pearson Education

4.2. ADDITIONAL REFERENCES

- Douglas E Comer, Hands-on Networking with Internet Technologies: A Lab Manual, Pearson Education,
- Andrew S. Tanenbaum, Computer Networks, 4/e, Pearson Education

4.3. INTERNET RESOURCES:

- www.edugrid.ac.in/webfolder/courses/cn/cn_index.htm
- http://www.webopedia.com/quick_ref/OSI_Layers.asp
- <http://www.functionx.com/networking/index.htm>

5. NOTE ON CURRICULAR TRANSACTIONS:

Innovative teaching techniques should be used in view of the severe communication problems of the hearing impaired students. Teaching in class rooms is through speech, writing, lip reading, signs and gestures and using Sign Language. Use of visual media, mainly projectors, smart boards will also be extensively used as an effective teaching aid.

The networks used in the college/institute should be used as an object of study in this course.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- i) A Quiz with 40% weightage,
- ii) An Assignment with 20% weightage and
- iii) A Test paper with 40% weightage.

6.1.2. Assignment

The assignment should consist of carefully chosen activities where students can refer internet or the notes given. All assignments should be preceded by assessment guidelines and submission policy. It should contain sufficient guidelines on the effort expected from the students.

6.1.3. Test

Special consideration is to be given even to the mode of written examination. Considering the students inadequate language ability due to their particular handicap, there is no meaning in testing their writing skills. Essay type questions shall be avoided. Even short answer questions should be limited to two or three sentences. More of multiple choice questions and fill up the blank type questions

has to be given. The special lecture notes prepared according to the syllabus by experts should be used as reference. This test paper could be of the same pattern as the End Semester question paper.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration.

SAMPLE QUESTIONS

QUIZ

Quiz will be based on each module and will ideally be conducted at the end of the concerned module. The questions should be of objective type. A sample quiz is given below:

1. Name the collection of computers and devices connected through communication channels.
2. Name the preferred Operating System languages for networking
3. Name a peripheral devices shared on a network
4. Name a facility which helps people to communicate over network
5. Name one Operating System which supports networking.

TEST

Answer **any 6** from the following questions

1. Discuss the need for network based on any 3uses
2. Write any 5 features of RS 232 Standard in data transmission
3. Write about the software and hardware requirements of a network
4. Define the following
 1. Computer network
 2. ARPANET
5. Define topology. Give schematic representation of different types of topologies.
6. Define frame. Explain the different error detecting checks used in packet transmission
7. What are packets? What are the 2 types of data in a packet?

ASSIGNMENT

This assignment is aimed at giving the students an opportunity to practice some activities that will enable them to acquire knowledge/experience related to some topics covered in the syllabus.

704 – JAVA PROGRAMMING - Lab

=====

1. AIM:

To provide an opportunity for hands-on practice in Java.

2. OBJECTIVES:

This course will provide hands-on practice in the following topics, under a variety of programming situations with a focus on writing, debugging and analysing object oriented programs.

3. SYLLABUS:

The laboratory work will consist of 15-20 experiments

1. Testing out and interpreting a variety of simple programs to demonstrate the syntax and use of the following features of the language: basic data types, operators and control structures.
2. 1 continued
3. Introduction to class, objects and methods
4. Simple programs using constructors
5. Program involving method overloading
6. Testing the above programs using command line arguments
7. 1-D Arrays: A variety of programs to declare, initialise, read, print and process 1-D arrays of various basic data types. Processing to include, selection, sum, counting, selective sum, selective counting, reversing etc.
8. 2-D Arrays: A variety of programs to declare, initialise, read, print and process 2D arrays of various basic data types.
9. Programs to demonstrate methods of String class.
10. Programs to introduce Interfaces-defining and implementing
- 11 Programs that demonstrates how to manage errors and use exceptions- try and catch
12. File handling in Java-Input output streams
13. Programs to introduce applets
14. Programs to demonstrate AWT Graphic methods
15. Program for loading and viewing images.

4. REFERENCES:

4.1. CORE REFERENCES

- E. Balaguruswamy, **“Programming in Java”**, 2nd Edition, TMH Publications

- Peter Norton, **“Peter Norton Guide to Java Programming”**, TechmediaPublications

4.2. ADDITIONAL REFERENCES

- Mastering JAVA2: John Zukowski
- Java Programming : Mike Mcgrath
- Java Second Edition made simple : Pk Mcbride
- Java made simple : Peter Mcbride
- Core Java : R. Nageswara Rao
- **1001 Java programmer’s tips** : Mark C. Chan, Steven W. Griffith, Anthony F. Iasi

4.3. INTERNET RESOURCES

- <http://java.about.com/od>
- <http://java.sun.com/docs/books/tutorial/>
- <http://www.leepoint.net/notes-java/index.html>
- <http://math.hws.edu/javanotes/c2/index.html>

5. NOTE ON CURRICULAR TRANSACTIONS:

Innovative teaching techniques should be used in view of the severe communication problems of the hearing impaired students. Teaching in class rooms is through total communication (which includes speech, writing, lip reading, signs and gestures). Use of visual media, mainly computers, will also be extensively used as an effective teaching aid.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- A Quiz with 40% weightage,
- A Test with 40% weightage and
- Lab Record with 20% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be mostly of multiple choice types.

6.1.2. Test

The test shall consist of an assigned task which the students shall perform on the computer.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration. The End Semester Assessment shall be based on the following:

- 70% for successful conduct of assigned tasks/experiments
- 15% for a Quiz
- 15% for Lab Record

SAMPLE QUESTIONS

1. Write a Java program to accept name of your 5 friends in command line and display them.
2. Accept 5 numbers in command line and display their sum.
3. Accept 5 numbers in command line and display their average
4. Accept rollno, name and marks of 5 students and display the details of student who secured first rank
5. Accept 5 numbers in command line and display the odd numbers

705. ELECTIVE (LAB)

The students shall choose to familiarize any one of the following areas.

1. VB.Net, SQL Server
2. ASP.Net & MySQL
3. MULTIMEDIA

705.1. ELECTIVE (LAB) - (ASP.Net & MySQL)

=====

1. AIM:

The aim of this course is to provide the student with the basic knowledge of ASP.net, XML, and MySQL. It also includes Developing, debugging, and deploying web applications using ASP.NET and the C#.NET.

2. OBJECTIVES:

At the end of this course, the student should be able to:

- Create an asp.net based web application by using Visual Studio .Net
- Create a simple Web page using HTML and CSS
- **implement form based validation in Asp.net**□
- Access database in Asp.net using ADO.Net
- Develop web based application project.
- Explain the syntax of XML

3. SYLLABUS:

MODULE I:

Overview of ASP.NET framework, Understanding ASP.NET Controls, Applications Web servers, IIS. Web forms, web form controls , web forms & HTML, Adding controls to a web form ,Buttons, Text Box ,Labels, Checkbox, Radio Buttons, List Box, etc.Running a web Application, creating a multiform web project.

MODULE II:

Form Validation: Client side validation, server Side validation,Validation Controls : Required Field Comparison Range. Calendar control, Ad rotator Control, Internet Explorer Control. State management- View state, Session state, Application state,

MODULE III:

Introduction to MySQL. Architecture of ADO.NET, Connected and Disconnected Database, Create Connection using ADO.NET Object Model, Connection Class, data bound Controls and Data Grid.Database Accessing on web applications: Data

Binding concept with web, creating data grid, Binding standard web server controls. Display data on web form using Data bound controls.

MODULE IV:

Writing datasets to XML, Reading datasets with XML. Web services: Introduction, building & consuming a web service, Web Application deployment.

PRACTICAL:

- 1 Simple Web page & Website Design for a Department, College, Company etc.
- 2 Exercises using HTML, CSS and Master Pages.
- 3 Exercises using Asp.net controls.
- 4 Exercises using Ado.net.
- 5 Exercises using XML.

4. REFERENCES

4.1 CORE REFERENCES

ASP.NET 4 24-Hour Trainer: Toi B. Wright

ASP.NET 3.5 Unleashed By: Stephen Walther

Ado.net The Complete Reference By: [Michael Otey](#)

C#.Net Illuminated By: [Arthur Gittleman](#)

C# programming – wrox publication

4.2 ADDITIONAL REFERENCES

Asp.Net: A Beginner's Guide **by** : [David Mercer](#)

Beginning Asp.net 1.0 By : [Ajoy Krishnamoorthy](#), [ChrisGoode](#), [Chris Ullman](#), [Christopher L. Miller](#), [Dave Sussman](#)

ASP.Net 2.0 Illustrated **by** [Alex Homer](#) [Dave Sussman](#)

C# programming Black Book by Matt telles

4.3 INTERNET RESOURCES

<http://www.dotnetspider.com/tutorials/>

<http://www.freebookcentre.net/MicroSoftTech/Asp-DotNet-Books-Download.html>

<http://www.asp.net/>

<http://www.codeproject.com/KB/aspnet/>

<http://www.csharp-station.com/Tutorials/AdoDotNet/Lesson01.aspx>

<http://www.mysqltutorial.org/>

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- a. A Quiz with 40% weightage,
- b. A Test with 40% weightage and

c. Lab Record with 20% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be mostly of multiple choice types.

6.1.2. Test

The test shall consist of an assigned task which the students shall perform on the computer.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration. The End Semester Assessment shall be based on the following:

1. 70% for successful conduct of assigned tasks/experiments
2. 15% for a Quiz
3. 15% for Lab Record

SAMPLE QUESTION

1. Write a program containing the following controls:

- A ListBox
- two Buttons
- An Image
- two Label
- Text box

The listbox is used to list items available in a store. When the user clicks on an item in the listbox, its image is displayed in the image control. When the user clicks the button, the cost of the selected item is displayed in the control and **shows the message "Enter the quantity:" in a label control** When the user enters the quantity in the textbox and clicks the button, the total cost is evaluated and displayed in another label.

2. Create a Form that receives the user name, address, date, nationality, country preferred for working and skill sets from the user and stores the user name in the client using cookies. The country preferred data should appear in a dropdownlist whereas; others should be entered in a textbox. Validate all the controls. The **Form is named "formexp.aspx". The date should appear between "1/1/1900" and "1/1/2090".**

3. Write an example program for detail view control.

705.2. ELECTIVE (LAB) - (VB.Net, SQL Server)

=====

1. AIM:

The aim of this course is to teach how to design and write applications using Visual Basic .Net. The students can develop simple application, to more complex applications that are linked to a database.

2. OBJECTIVES:

The course introduces the Visual Studio development environment and fundamental Visual Basic programming statements. Learn to design professional user interfaces that feature a variety of Windows controls, including buttons, text boxes, combo boxes, and radio buttons. Add Visual Basic procedures to your Windows forms to interact with users and add functionality to your applications. Review essential programming concepts, including variable declarations, conditional statements, loops, and arrays, using the Visual Basic syntax. Learn to create Windows forms that access MSSQL database using the Visual Basic programming language and the Visual Studio development environment. Configure data sources and data-related components using a variety of tools, including the Data Source Configuration Wizard, the Dataset Designer, and the TableAdapter Configuration Wizard. Take advantage of the Data Sources window and Visual Studio's drag-and-drop data-binding capabilities to build data-centric forms. Set up datasets that include data from related tables by creating relationships and establishing foreign keys. Learn techniques to validate data and make updates to the underlying database. Other topics include creating reports and using the Binding Source component to navigate through, sort, and filter data.

3. SYLLABUS:

Module I:

Introduction to .NET, .NET Framework features & architecture, CLR, Common Type System, MSIL, Assemblies and class libraries. Introduction to visual studio, Project basics, types of project in .Net, IDE of VB.NET- Menu bar, Toolbar, Solution Explorer, Toolbox, Properties Window, Form Designer, Output Window, Object Browser.

The environment: Editor tab, format tab, general tab, docking tab. visual development & event drive Programming -Methods and events.

Module II:

The VB.NET Language- Variables -Declaring variables, Data Type of variables, Forcing variables declarations, Scope & lifetime of a variable, Constants, Arrays, types of array, control array, Collections, Subroutines, Functions, Passing variable Number of Argument Optional Argument, Returning value from function.

Control flow statements: conditional statement, loop statement. MsgBox&Inputbox.

Module III:

Working with Forms : Loading, showing and hiding forms, controlling One form within another.

GUI Programming with Windows Form: Textbox, Label, Button, Listbox, Combobox, Checkbox, PictureBox, RadioButton, Panel, scroll bar, Timer, ListView, TreeView, toolbar, StatusBartheir Properties, Methods and events. OpenFileDialog, SaveFileDialog, FontDialog, ColorDialog, PrintDialog. Link Label.

Designing menus : ContextMenu, access &shorcut keys.

Module IV:

Object oriented Programming: Classes & objects, fields Properties, Methods & Events, constructor, inheritance. Access Specifiers: Public Private, Protected. Overloading, My Base & My class keywords.

Module V:

Database programming with ADO.NET – Overview of ADO, from ADO to ADO.NET, Accessing Data using Server Explorer. Creating Connection, Command, Data Adapter and Data Set with OLEDB. Display Data on data bound controls, display data on data grid backend MSSQL. Generate Reports Using CrystalReport / Data Report.

4. REFERENCES:

4.1 CORE REFERENCES

- VB.NET Programming Black Book by stevenholzner –dreamtech publications
- Mastering VB.NET by Evangelospetroustos- BPB publications
- Introduction to .NET framework-Wrox publication

4.2 INTERNET RESOURCES

- <http://msdn.microsoft.com/net/>
- <http://www.programmersheaven.com/2/VB-NET-School>

5. NOTE ON CURRICULAR TRANSACTIONS:

Innovative teaching techniques should be used in view of the severe communication problems of the hearing impaired students. Teaching in class rooms is through total communication (which includes speech, writing, lip reading, signs and gestures). Use of visual media, mainly computers, will also be extensively used as an effective teaching aid.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- a. Quiz with 40% weightage,
- b. Test with 40% weightage and
- c. Lab Record with 20% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be mostly of multiple choice types.

6.1.2. Test

The test shall consist of an assigned task which the students shall perform on the computer.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration. The End Semester Assessment shall be based on the following:

1. 70% for successful conduct of assigned tasks/experiments
2. 15% for a Quiz
- 5) 15% for Lab Record

3. ELECTIVE (LAB) - (MULTIMEDIA)

1. AIM:

To gain hands-on knowledge to create exciting projects including 3D Modelling Animated advertisement, an animated logo etc by exploring different modifiers in 3D Max

2. OBJECTIVES:

The student should learn how to:

- Use Local Coordinates in 3D
- Create 3D objects using different types of modelling.
- Use key frame and timeline to control an animation.
- Use different modifiers such as bevel, extrude, lathe, Mesh Smooth etc
- Use Light, Camera, Shapes ,Geometry etc in 3D modelling and animation

3. SYLLABUS:

Lab Sessions to Practice the following features

Introduction of local coordinates in 3D, difference between 2D and 3D, basic tools Such Select and move, Scale ,rotate etc . Introduction of basic shapes from standard Primitives, Introduction of Extended Primitives, Compound Objects, Stairs, Foliage, Windows, Door , Lights, Cameras etc
3D modeling and animation using shapes and modifiers.

4. INTERNET RESOURCES:

- www.usa.autodesk.com
- <http://download.autodesk.com/us/3dsmax/2011/help/index.html>

5. NOTE ON ASSESSMENT:

5.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

1. A Quiz with 40% weightage,
2. A Test with 40% weightage and
3. Lab Record with 20% weightage.

5.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be mostly of multiple choice types.

5.1.2. Test

The test shall consist of an assigned task which the students shall perform on the computer.

5.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration. The End Semester Assessment shall be based on the following:

1. 70% for successful conduct of assigned tasks/experiments
2. 15% for a Quiz
3. 15% for Lab Record

SAMPLE QUESTIONS

TEST

- Create a 3D model of a Bed Room as shown in the figure








QUIZ

Fill in the blanks (1 mark each)

1. _____ Cancels the previous Undo View Change.(Redo View Change, Ctrl+Y)
2. _____ contains Relatively simple 3D objects such as Box, Sphere, and Cylinder, as well as Torus, Plane, Cone, GeoSphere, Tube, Teapot, and Pyramid.(Standard Primitives)
3. _____(Extended Primitives) contains More complex 3D objects such as Capsule, OilTank, Spindle, Hedra, Torus Knot, and Prism.

4. _____(Compound Objects) include Scatter, Connect, ShapeMerge, Booleans, Morph, BlobMesh, Terrain, and Loft.
5. _____(Booleans) combine the geometry of two objects using union, intersection, and difference operations.
6. _____(Morphs) are animated objects that change one geometric shape into other shapes over time.

Match the following (1 mark each)

1. Brush Tool : _____  (a)
2. Selection Tool : _____  (b)
3. Ink bottleTool : _____  (c)
4. Lasso Tool : _____  (d)
5. Eraser Tool : _____  (e)

706 - COMPUTER GRAPHICS II – LAB

=====

1. AIM:

To gain hands-on knowledge to create exciting projects including an animated advertisement, an animated logo, a photo/video gallery, a website and more.

2. OBJECTIVES:

The student should learn how to:

- Create graphics in the Flash environment using drawing tools, and modify objects with fills and strokes, gradients, transformations, groups, and other tools.
- Use layers and symbols to organize and reuse Flash graphics, and create and edit symbol instances to produce complex artwork.
- Use frames, key frames, and the Flash timeline to control when graphics appear on the stage.
- Apply motion tweens to animate changes in the appearance and location of objects.
- Create complex animation with text, shape tweens, and masks.
- Create buttons that display video and audio feedback using the four button states.
- Write and understand basic ActionScript to control the playhead on the timeline for navigation and to load external images and animations.

3. SYLLABUS:

Lab Sessions to Practice the following features on a selected Multimedia Authoring Tool (Time based)

UNIT-1: Drawing and painting tools, Working with color, Using imported artwork, Using Layers, Using Type, Using Symbols and instances, Animation Fundamentals, Creating Animation.

UNIT-2: Using basic commands for navigation & interaction, Publishing and Exporting.

4. REFERENCES:

4.1. Core References

Adobe Creative Team, Adobe Flash Professional CS5 Classroom in a Book, Adobe Press

4.2. Additional References

Lee Purcell, Flash character animation: applied studio techniques , Sams publishing

Adobe Creative Team, Adobe Flash Catalyst CS5 Classroom in a Book, Adobe Press

4.3. Internet Resources

www.adobe.com/support/flashcatalyst/gettingstarted/

www.adobe.com/devnet/flash.html

www.entheosweb.com > Free Resources

www.flashkit.com/tutorials/

5. NOTE ON CURRICULAR TRANSACTIONS:

Innovative teaching techniques should be used in view of the severe communication problems of the hearing impaired students. Since the software can be used for different purposes, many small exercises on specific topics are included.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

1. A Quiz with 40% weightage,
2. A Test with 40% weightage and
3. Lab Record with 20% weightage.

6.1.1. Quiz

The quiz shall contain at least 10 questions. The questions should be mostly of multiple choice types.

6.1.2. Test

The test shall consist of an assigned task which the students shall perform on the computer.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration. The End Semester Assessment shall be based on the following:

1. 70% for successful conduct of assigned tasks/experiments
2. 15% for a Quiz
3. 15% for Lab Record

SAMPLE QUESTIONS

1. TEST

Create a Teaching Learning Material for Preschool children using Flash to teach them **Colours**.





- It must contain:
 - At least one Tweened animation.
 - Animated buttons for navigation.
- Save your work as **TLM fla** and publish it as **TLM.exe**.
- If necessary you can use the pictures in your exam folder.

2. QUIZ

I. Fill in the blanks (1 mark each)

1. File format of Flash is _____
(* .exe, * .doc, * .fla)
2. Flash is used to create _____
(Animated movies, Raster graphics, collage)
3. In Flash, the artwork is drawn and imported on the _____
(Stage, Toolbox, Timeline)
4. Flash movies consist primarily of _____ graphics.
(Raster, Vector, Bitmap)
5. The _____ panel stores reusable elements called symbols.
(Library, Info, Color mixer)
6. _____ frames per second is the default frame rate of Flash.
(24, 12, 30)

II. Match the following (1 mark each)

- | | | | | |
|-----------------|---|-------|-------------------------------------------------------------------------------------|-----|
| Selection Tool | : | _____ |  | (a) |
| Ink bottle Tool | : | _____ |  | (b) |
| Lasso Tool | : | _____ |  | (c) |
| Eraser Tool | : | _____ |  | (d) |

Semester VIII

Total Marks 600

Subject Code and Name	In-sem Max	End-sem Max	End-sem min	Total	Min. Pass
801 Software Documentation and Testing	25	75	30	100	50
802 Software Testing Lab	25	75	30	100	50
803 Project	100	300	120	400	200

801 – SOFTWARE DOCUMENTATION AND TESTING

=====

1. AIM:

- This course provides principles of Software documentation, Testing and testing tools.
- It enables the students to develop different diagrams as part of Software documentation.
- It enables the students to learn about testing fundamentals.

2. OBJECTIVES:

On successful completion of the course the students must have

- understood the importance and concepts of Software documentation
- Acquired the skill of software testing
- Exposed to software testing tools.

3. SYLLABUS:

Module I: Introduction-System analysis & System Design, System Analyst, Software Development Life Cycle , project estimation techniques, feasibility study, software requirements, software requirements specification, structure of software requirements specification document, design principles, modularity, top-down and bottom-up approaches.

Module II: Design models- Algorithms and Flowchart , Data Flow Diagrams, symbols for DFDs, developing DFD model of a system, E-R diagrams, developing E-R diagram, Gantt chart.

Module III: Object oriented design, UML, UML diagrams, class diagram, use case diagram, sequence diagram, collaboration diagram, component diagram, deployment diagram, developing UML diagrams for a system.

Module IV: Testing- testing fundamentals, error, fault and failure, Testing and Debugging, Software Quality, White box testing, Black box testing, Manual Testing Automation Testing (QC & QTP), cause-effect graphing, purpose of testing, comparison of testing strategies, unit testing, integration testing, system testing, acceptance testing, Types of test Tools ,Software testing Fundamentals: Test case, creating Test case, Positive test cases, Negative test cases.

4. REFERENCES:

4.1 CORE REFERENCES

- Boris Beizer, Software testing techniques, Dreamtech Press, Second Edition – 2003.
- Myers and Glenford.J., The Art of Software Testing, John-Wiley & Sons, 1979
- By Gary B. Shelly, Thomas J. Cashman, Harry J. Rosenblatt , Systems Analysis and Design

4.2 ADDITIONAL REFERENCES

- Roger.S.Pressman, Software Engineering – A Practitioner’s Approach ,Mc-Graw Hill, 5th Edition, 2001
- Marnie.L. Hutcheson, Software Testing Fundamentals, Wiley-India, 2007
- Alan Dennis , Systems Analysis and Design (Hardcover)

4.3 INTERNET RESOURCES

- <http://www.slideshare.net/javiergs/software-testing-notes-part-12>
- <http://www.cs.bham.ac.uk/~exc/Teaching/STesting/>
- <http://www.bcanotes.com/Sad.html>

5. NOTE ON CURRICULAR TRANSACTIONS:

Innovative teaching techniques should be used in view of the severe communication problems of the hearing impaired students. Teaching in class rooms is through speech, writing, lip reading, signs and gestures. Use of visual media, mainly computers, will also be extensively used as an effective teaching aid.

6. NOTE ON ASSESSMENT:

6.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- i) A Quiz with 40% weightage,
- ii) An Assignment with 20% weightage and
- iii) A Test paper with 40% weightage.

6.1.2. Assignment

The assignment should consist of carefully chosen activities where students can refer internet or the notes given. All assignments should be preceded by

assessment guidelines and submission policy. It should contain sufficient guidelines on the effort expected from the students.

6.1.3. Test

Special consideration is to be given even to the mode of written examination. Considering the students inadequate language ability due to their particular handicap, there is no meaning in testing their writing skills. Essay type questions shall be avoided. Even short answer questions should be limited to two or three sentences. More of multiple choice questions and fill up the blank type questions has to be given. The special lecture notes prepared according to the syllabus by experts should be used as reference. This test paper could be of the same pattern as the End Semester question paper.

6.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration.

SAMPLE QUESTIONS

SOFTWARE DOCUMENTATION AND TESTING - TEST

Maximum Marks: 25

Duration: 1Hrs

I. Fill in the blanks with correct answer

(1 X 5 =5 marks)

- 1 ----- is a person who conducts a study, identifies activities and objectives?
- 2 ----- Tool Capture details describing current system?
- 3 ----- tool helps the analyst in translating designs into functioning applications?
- 4 All systems have acceptable levels of performance called -----?
- 5 ----- is any event or activity that affects the whole organization?

II. Difference between

(1 X 3 = 3 marks)

- 1 System analysis and System analyst?

III. Answer the Question

(2X 8.5 = 17 marks)

1. Describe about various Tools used for software development?
2. Describe about SDLC method?

802 – SOFTWARE TESTING LAB

=====

1. AIM:

- This course will provide hands on experience of Software Testing tools.
- To enable the students to learn about the usage of tools for Software testing.

2. OBJECTIVES:

On successful completion of the course the students must have

- understood the concepts of Software testing
- got the skill in software testing tools
- expertise in using software testing tools.

3. SYLLABUS:

Running and testing using (any) testing tools

Note: Student have to check their own developed software through any Testing tool.

4. REFERENCES:

4.1 CORE REFERENCES

- Dr.K.V.K.K.Prasad, Software Testing Tools, Dreamtech Press, 2007

4.2 ADDITIONAL REFERENCES

- Roger.S.Pressman, Software Engineering – A Practitioner’s Approach ,Mc-Graw Hill, 5th Edition, 2001
- Marnie.L. Hutcheson, Software Testing Fundamentals, Wiley-India,2007
- Boris Beizer, Software testing techniques, Dreamtech Press, Second Edition – 2003.
- Myers and Glenford.J., The Art of Software Testing, John-Wiley & Sons,1979

4.3 INTERNET RESOURCES

- <http://www.slideshare.net/javiergs/software-testing-notes-part-12>
- <http://www.cs.bham.ac.uk/~exc/Teaching/STesting/>

5. NOTE ON ASSESSMENT:

5.1. Internal Assessment:

The course shall be continuously assessed through 3 Internal Assessments, each consisting of

- i) A Quiz with 40% weightage,
- ii) An Assignment with 20% weightage and
- iii) A Test paper with 40% weightage.

5.1.2. Assignment

The assignment should consist of carefully chosen activities where students can refer internet or the notes given. All assignments should be preceded by assessment guidelines and submission policy. It should contain sufficient guidelines on the effort expected from the students.

5.1.3. Test

Special consideration is to be given even to the mode of written examination. Considering the students inadequate language ability due to their particular handicap, there is no meaning in testing their writing skills. Essay type questions shall be avoided. Even short answer questions should be limited to two or three sentences. More of multiple choice questions and fill up the blank type questions has to be given. The special lecture notes prepared according to the syllabus by experts should be used as reference. This test paper could be of the same pattern as the End Semester question paper.

5.2. End Semester Assessment:

The End Semester examination must be of maximum 3 hours duration.

803 - PROJECT WORK

=====

1. AIM:

To expose student to industry–standard project practices, through a real life project work under time and deliverable constraints, applying the knowledge acquired through various course.

2. OBJECTIVES:

- To provide an opportunity to apply the knowledge gained through various courses in solving a real-life problem
- To provide an opportunity to practice different phases of software/system development life cycle
- To introduce the student to a professional environment and/or style typical of a global IT industry
- To provide an opportunity for project management
- To provide an opportunity for effective, real-life, technical documentation
- To provide an opportunity to practice time, resource and person management.

3. PROJECT GUIDELINES:

The aim of the project work is to expose students to industry-standard practices. Evaluation of the Project work and conduct of viva-voce shall be done by a common board of examiners at the end of eighth semester.

The minimal phases for the project are: Project search, finalization and allocation, Investigation of system requirements, Data and Process Modeling, System Design, Program design, Program coding and unit testing, System integration, System implementation and acceptance testing.

3.1 Planning the Project:

The BSc (Computer Science)(HI) Major Project is an involved exercise which has to be planned well in advance.

3.2 Selection of project work: Project work could be of 3 types:

a) Developing solution for a real-life problem:

In this case, a requirement for developing a computer based solution already exists and the different stages of system development life cycle is to be implemented successfully. Examples are Accounting Software Package for a particular organization, Computerization of administrative functions of an

organization, Web Based Commerce, etc. The scope for creativity and exploration in such projects is limited, but if done meticulously, valuable experience in the industrial context can be gained.

(b) Innovative Product development:

These are projects where a clear-cut requirement for developing a computer based solution may not be existing but a possible utility for the same is conceived by the proposer. An example is a Malayalam Language Editor with Spell Checker, Computer Music Software for Indian Music, Heat Engines Simulation Software for eLearning, Digital Water Marking Software.

(c) Research level project:

These are projects which involve research and development and may not be as structured and clear cut as in the above case. Examples are Malayalam Character Recognition, Neural Net Based Speech Recogniser, Biometric Systems, Machine Translation System etc. These projects provide more challenging opportunities to students, but at BSc level is a difficult choice. If any student identifies proper support in terms of guidance, technology and references from external organizations and also the supervisors are convinced of the ability of the student(s) to take up the project, it shall be permitted. The methodology and reporting of such, projects could be markedly-different from type (a) and is left to the proposer /external supervisor of the projects.

3.3 INDIVIDUAL PROJECT:

The project should be done individually by each candidate.

3.4 Selection of Tools:

No restrictions shall be placed on the students in the choice of platforms/tools/languages to be utilized for their project work, though open source is strongly recommended, wherever possible. No value shall be placed on the use of tools in the evaluation of the project

3.5. PROJECT GUIDE & ASSESSMENT

The project guide should ideally be a post graduate in Computer area with **minimum of two years' work experience OR BTech in Computer Science OR BTech degree in any discipline with experience in Computer area**

In-semester Assessment

The internal marks of the project work shall be awarded as follows.

1. Timely completion of given tasks : 25 marks

2. Quality of project documentation : 25 marks
3. Achievement of project deliverables : 25 marks
4. Effective technical presentation of the work : 25marks

End-semester Assessment

The board of examiners shall award 300 marks based on the following components:

1. Quality of project documentation : 50 marks
2. Achievement of project deliverables : 150 marks
3. Effective technical presentation of the work : 50 marks
4. Viva Voce/Quiz : 50 marks

3.6 Documentation:

Three copies of the project report must be submitted by each student (one for department library, one for the organization where the project is done, and one for the student himself/herself).

The text of the report should be set in 11 pt, Verdana, 1.5 line spaced.

Headings should be set as follows:

- i. CHAPTER HEADINGS 18 pt, Verdana, Bold, All Caps, and Centered.
- ii. Section Headings 12 pt, Verdana, Bold, All Caps, Left Adjusted.
- iii. Section Sub-headings 12 pt, Verdana, Bold, Left Adjusted.

Titles of Figures, Tables etc to be done in 12 point, Verdana, Italics, Centered.

Page numbers shall be set at right hand top corner.

Only single space need be left above a section or sub-section heading and no space may be left after them.