



UNIVERSITY OF MYSORE

M.Sc (Speech-Language Pathology) Semester Courses Regulations - 2002

1.0 Courses offered and duration of the course

1.1 M.Sc (Speech-Language Pathology)

1.2 Duration of the course: 4 Semesters / 2 years

Note: Each semester shall extend over a minimum period of eighteen weeks excluding examination days.

2.0 Eligibility for admission

2.1 Candidates with a B.Sc (Speech & Hearing) degree of the University of Mysore or any other University considered as equivalent thereto with an average of not less than 55% of marks are eligible for admission subject to 2.2 (In case of SC/ST candidates, percentage will be relaxed upto 5%).

Note: "Average" refers to average of the aggregate marks obtained in all the years/semesters of B.Sc (Speech & Hearing) course.

2.2 Only those candidates who have not completed 30 years of age as on 1st July of the relevant academic year shall be eligible for admission.

2.3 Admission shall be made only on the basis of the marks obtained in the entrance examination conducted by the Institution for this purpose. Further, only those candidates who secure more than 40% in the entrance examination are eligible for admission.

2.4 Entrance Examination

2.4.1 The object of entrance examination is to assess the knowledge and skill of the candidates in the core subjects of B.Sc (Speech & Hearing).

2.4.2 The Head of the Institution shall appoint a committee of examiners to conduct the entrance examination.

2.4.3 The entrance examination shall be conducted at the Head Quarters of the Institution.

2.4.4 Duration of the entrance examination shall be for 100 minutes with 100 questions of the multiple choice type.

2.4.5 Candidates can appear for the entrance examination in anticipation of results of qualifying examination. However, they have to fulfill the condition of 2.1 and provide records for the same before the stipulated date for admission.

2.4.6 The selection committee shall consist of the Head of the Institution, as Chairperson, one faculty member of the institution nominated by Head of the Institution, and one member nominated by the Vice-Chancellor.

3.0 Scheme of Instruction

3.1 In each semester there shall be five papers. The detailed scheme of examination and paper titles are as given in **Annexure I**.

3.2 Dissertation/Clinical practicum shall be in lieu of a paper.

3.3 The syllabus of every paper shall as far as possible, be divided in to five units.

3.4 Candidates shall attend camps/extension programs/educational tour conducted by the institution.

3.5 Hours of instruction (contact hours) per week

Theory : 4 hours per subject per week

Practical : I year – 15 hours per week

II year – 20 hours per week

4.0 Attendance

4.1 Each semester shall be taken, as a unit for purpose of calculating attendance and a candidate shall be considered to have put in the required attendance for the semester, if he/she has attended not less than 80% in case of theory classes and 90% in clinical practicum during each semester.



- 4.2 Shortage of attendance up to 15% may be condoned by the Vice Chancellor on the recommendation of the Head of the Institution on payment of a fee prescribed by the University. There shall be no condonation if attendance is below 65% in theory classes and 75% in clinical practicum during any semester.
- 4.3 A candidate who is having shortage of attendance in clinical practicum is permitted to make up this shortage by attending clinical work during vacation immediately after that semester but before commencement of the next semester.
Note: The candidates are permitted to avail this facility (4.3) in the I & III semesters only, with prior permission of the Head of the Institution.
- 4.4 A candidate who fails to satisfy the requirement of attendance in a semester, shall rejoin the same semester in the immediate next academic year.
Note: This facility shall be available only **once** in the entire course.
- 4.5 If a candidate represents his/her Institution in Sports/NSS/Cultural or any official activities, he/she is permitted to avail to a maximum of 30 days in an academic year based on the recommendation and prior permission of the Head of the Institution.

5.0 Medium of Instruction

- 5.1 Medium of instruction shall be English.

6.0 Appearance for the Examination

- 6.1 Candidates on satisfactorily completing a semester shall apply for the examination in all papers prescribed for that semester.

7.0 Scheme of Examination

- 7.1 There shall be a University Examination at the end of each semester. The detailed scheme of examination is as given in **Annexure I**.
- 7.2 Duration of examination of theory paper of 80 marks shall be for 3 hours.
- 7.3 Every theory paper shall comprise of Five Questions with internal choice covering the entire syllabus
- 7.4 Each theory paper shall comprise of FIVE questions with internal choice, covering entire syllabus. Each full question shall carry 16 marks with internal divisions such as 8+8, 10+6, 8+4+4, 12+4 and so on. The subdivisions in a question shall not be more than **three**.
Note: Model question paper pattern is as given in **Annexure II**.
- 7.5 In case of theory paper the internal assessment will be for 20 marks, assessed through tests, seminars, camps and other assignments.
- 7.6 The Head of the Institution may decide to give test/seminar to candidates who absent themselves for the same, only if he is convinced that the absence of the candidate is on valid grounds. This facility shall only be availed **within the duration of that semester**.
- 7.7 The statement of internal assessment marks shall be sent to the Registrar (Evaluation) at least one week prior to the commencement of theory examination of that semester.
- 7.8 Clinical Practicum
- 7.8.1 The clinical practicum examinations shall be in the main subjects of study, i.e., in Audiology/Speech-Language Pathology (including the components of speech sciences).
- 7.8.2 Clinical practicum is part of all the semesters. However, internal assessment and clinical practicum examination with respect to clinical practicum of I and II semesters shall be conducted at the end of II semester. And that of III and IV semesters shall be conducted at the end of the IV semester.
- 7.8.3 Break up of marks of clinical practicum shall be as follows:
- 50 marks are allotted for internal assessment which is awarded on the basis of continuous evaluation of the clinical work of the candidate by the faculty of the departments to be nominated by the Director. The faculty shall evaluate each candidate on the following bases:
 - Clinical skill/repertoire
 - Planning of therapy and execution
 - Maintenance and quality of clinical diary, lessons plans and progress report
 - Rapport with case/family



- v. Development of teaching aids
- vi. Efficient use of time/skills in execution
- vii. Professional attitude/motivation/aptitude for clinical work.
- (b) 50 marks for clinical viva-voce conducted by an external examiner who shall examine the candidates' clinical skills while working with clinical population. Each candidate shall be assigned one or more subjects for this purpose by the heads of the concerned departments with the approval of the Head of the Institution.
- 7.8.4 Candidates failing/absenting in the clinical practicum examination shall repeat the clinical work of the previous two semesters i.e., candidates failing in clinical practicum of II semester shall repeat I and II semesters with respect to clinical practicum. Such candidates are not permitted to go to III semester. Candidates failing in clinical practicum of IV semester shall repeat III and IV semesters with respect to clinical practicum.
- 7.9 Dissertation work
 - 7.9.1 There shall be 100 marks for dissertation work.
 - 7.9.2 The candidates shall submit three copies of dissertation before the commencement of theory examination of that semester. Candidates who fail to submit their dissertations on or before the stipulated date shall not be permitted to appear for the final semester examination.

8.0 Board of Examiners, Valuation

- 8.1 There shall be a Board of Examiners for scrutinizing and approving the question papers and scheme of valuation.
- 8.2 About 50% of the examiners appointed for setting of question papers in each semester shall be from outside the Institution.
- 8.3 There shall be double valuation (internal and external) for all theory and dissertation work, the average of the marks awarded by the two examiners is taken as final award.
- 8.4 In cases of 20% or more deviation in the marks awarded by two examiners, the script shall be referred to the third valuer (who shall be an external) and the average of the nearest two shall be considered for the final award of marks.
- 8.5 Challenge Valuation : A student who desires to challenge the marks awarded to his/her may do so by submitting an application along with the prescribed fee to the Registrar (Evaluation) within 15 days after the announcement of results. Such candidates shall be provided with a photocopy of the answer book after concealing the name of the valuers. The answer scripts for which challenge valuation is sought for shall be sent to another external examiner. The average of the marks awarded in the challenge valuation and the marks of the earlier valuation, which is closer to the challenge valuation, shall be the final award.

9.0 Classification of successful Candidates

- 9.1 Minimum for a pass in each paper shall be 50% (exam. proper and internal assessment put together) and 50% in aggregate of all the semesters put together. There shall be no separate minima either for exam proper or for internal assessment.
- 9.2 Minimum for a pass in clinical practicum in each part (a & b of 7.8.3) shall be 50%.
- 9.3 For declaration of, First class with Distinction / First Class / Second class, the aggregate of the total marks secured by a candidate (including repeaters) in all the semesters shall be considered as detailed below:

70	≤	P	≤	100	First Class with Distinction
60	≤	P	<	70	First Class
50	≤	P	<	59	Second Class

Here P is the percentage of total marks secured in all the semesters of that course.

10.0 Provisions for Repeaters

- 10.1 A candidate is allowed to carry all the previous uncleared papers **except clinical practicum** to the subsequent semester/semesters subject to Regulation 7.8.3.
- 10.2 Such of those candidates who have failed/remained absent/opt to improve in any one or more papers (theory/dissertation work), henceforth called as repeaters, shall appear/improve in such paper/s



during the two immediate successive examinations.

- 10.3 Examination for odd/even semester shall be conducted respectively at the end of odd/even semester (odd with odd, even with even).
- 10.4 The candidate shall take the examination as per the syllabus and the scheme of examination in force during the subsequent appearances.
- 10.5 A candidate who seeks improvement has to surrender **the provisional pass certificate**/original marks cards of that semester.
- 10.6 The marks secured in the previous attempt shall be retained if the same is higher. There is no provision for improvement of internal assessment or clinical practicum.
- 10.7 A candidate is permitted to apply for improvement in any paper of the particular semester within 30 days from the date of announcement of results of that semester.

11.0 Award of Grace Marks

- 11.1 Grace marks shall be awarded to a paper to a maximum of 2%, if after gracing, the candidate gets minimum prescribed marks and passes in that paper. The maximum grace marks for the whole examination shall not exceed 10 marks.
- 11.2 A candidate shall be eligible to a maximum of 5 grace marks, provided, the candidate
 - i. appears for entire examination
 - ii. he/she has failed in only one paper
 - iii. passes the examination by such gracing
 - iv. gets the minimum prescribed marks in the paper and aggregate for passing by such gracing.
- 11.3 Gracing shall also be done for the purpose of declaring classes (First Class with Distinction, First Class and also Second Class) on the following guidelines:
 - a) For an examination with a maximum of 500 marks or less there shall be a gracing of TWO marks only.
 - b) If the maximum marks prescribed for an examination is more than 500 marks, every unit of 500 marks or part thereof shall be graced by **ONE MARK**. However, such gracing shall not exceed **Four Marks in all**.
 - c) This provision is applicable only in the last (final semester examination of the course).
- 11.4 Gracing under 11.1 and 11.2 shall not be applied simultaneously for the same candidate in any examination.
- 11.5 Grace marks awarded as per 11.1 for passing a paper and 11.2 for passing the whole examination are shown only in the ledger and not in the statement of marks. However, the grace marks awarded for class declaration shall be indicated along with the aggregate marks actually awarded.
- 11.6 Grace marks awarded for making up of deficiency in a paper/s of a semester, shall be deducted first from out of the component/s of the same paper which has no minimum for pass. After such deduction the balance of grace marks if any, shall be deducted equally (as far as possible) from the marks obtained in other paper/s of that semester, in the order of their appearance, without affecting the results (pass etc.) of the candidate.
- 11.7 Any fraction in the calculation of percentage of grace marks as above may be rounded off to meet higher digit (on the principle of approximation).
- 11.8 In case of tie, the candidate or a candidate who secures marks without grace or less grace marks is preferred for ranking/awarding prizes/medals.

12.0 Declaration of Rank

- 12.1 Ranks shall be declared for the number of persons equal to 10% of the total number of candidates appearing for any final semester examinations (fractions being rounded off to the nearest integer as per convention), subject to a minimum of one and maximum of ten (provided there were at least five candidates appeared for the examination).
- 12.2 Ranks shall be declared on the basis of the aggregate of the total marks secured by a candidate in all the semesters.
- 12.3 Ranks shall be given from one onwards in the descending order of the total marks obtained in all the examinations considered for the purpose.
- 12.4 If more persons than one are bracketed with the same marks, all of them shall get the same rank



which is the highest possible rank for them. E.g. If two persons are bracketed with the same marks for the top position, both will get the same rank (Rank-I) and so on.

- 12.5 Rank certificate shall be issued only up to Rank-X for ranks actually declared as per 12.1 above.
- 12.6 A repeater (including a candidate who seeks improvement) shall not be eligible for rank.

13.0 Marks Cards

- 13.1 The marks cards shall be issued after affixing the security hologram of the University and laminating it on both sides.

14.0 Barring of simultaneous study

- 14.1 No candidate admitted to a degree course in a College/Institution under the jurisdiction of this University shall be permitted to study simultaneously in any other course leading to a degree (regular, evening & morning) offered by this or any other University.
- 14.2 If a candidate gets admitted to more than one course, the University shall cancel without giving prior notice, his/her admission to all the courses to which he/she has joined.

15.0 Miscellaneous

- 15.1 These revised regulations will apply to candidates admitted for the academic year 2002-03 and onwards.
- 15.2 Any other issue, not envisaged above, shall be resolved by the Vice Chancellor in consultation with the appropriate bodies of the university, which shall be final and binding.

REGISTRAR

VICE-CHANCELLOR



M.Sc (Speech-Language Pathology) SEMESTER SCHEME
SCHEME OF EXAMINATION

Sem No.	Paper No.	Paper Code	Title of the Paper	Marks for		
				Theory	I.A.	Total
1	2	3	4	5	6	7
I	1.1	LA 010	Research Methods in Speech-Language & Hearing	80	20	100
	1.2	LA 020	Statistics in Speech-Language & Hearing	80	20	100
	1.3	LA 030	Technology for Speech-Language & Hearing	80	20	100
	1.4	LA 040	Neurobiology of Speech & Language	80	20	100
	1.5	LA 050	Clinical Linguistics & Multilingual Issues in Communication	80	20	100
II	2.1	LB 010	Speech Production	80	20	100
	2.2	LB 020	Maxillofacial Anomalies & Phonological Disorders	80	20	100
	2.3	LB 030	Language, Cognition and Brain	80	20	100
	2.4	LB 040	Child Language Disorders	80	20	100
	2.5*	LB 050	a) Clinical Practicum (Internal) b) Clinical Practicum Examination (External)	- -	50 -	50 50
III	3.1	LC 010	Fluency & its Disorders	80	20	100
	3.2	LC 020	Speech & Language Processing	80	20	100
	3.3	LC 030	Aphasia	80	20	100
	3.4	LC 040	Voice & its Disorders	80	20	100
	3.5	LC 060	Motor Speech Disorders	80	20	100
IV	4.1	LD 010	Adult Language Disorders	80	20	100
	4.2	LD 020	Alternative & Augmentative Communication			
	4.3	LD 070	Suprasegmentals & Music Acoustics	80	20	100
	4.4*	LD 040	a) Clinical Practicum (Internal) b) Clinical Practicum Examination (External)	- -	50 -	50 50
	4.5	LD 050	Dissertation**	-	-	100

* (a) Clinical Practicum (Internal) shall begin from I/III semester. The Internal assessment marks are based on performance of I & II / III & IV semester's clinical work taken together.

** Candidates shall begin Dissertation work in III semester.

REGISTRAR

VICE-CHANCELLOR

Note: Changes recommended in the UOM Notification No.AC.2(S)/315/04-05 dated 26th March 2005 have been incorporated.



M.Sc (Speech-Language Pathology) Degree Course (Semester Scheme 2002)

Gracing Marks Regulation

Regulation No.11.0

Regulation 11.1 Illustration – 1 (Semester I and III)

Paper No./ Title	Theory / Practical		IA/Viva		Total			Grace Marks (GM)	Total after adding (GM)	Net ded	Total after net ded (Final total)	Remarks
	Max	Marks Scored	Max	Marks Scored	Max	Min	Marks Scored					
2	3	4	5	6	7	8	9	10	11	12	13	14
1.1 A	80	41	20	08	100	50	49	01	50	-	50	Passes
1.2 B	80	40	20	07	100	50	47	-	47	-	47	Fails
1.3 C	80	42	20	06	100	50	48	02	50	-	50	Passes
1.4 D	80	46	20	11	100	50	57	-	57	05	52	Passes
1.5 E	80	40	20	08	100	50	48	02	50	-	50	Passes

Regulation 11.1 Illustration – 2 (Semester II)

Paper No./ Title	Theory / Practical		IA/Viva		Total			Grace Marks (GM)	Total after adding (GM)	Net ded	Total after net ded (Final total)	Remarks
	Max	Marks Scored	Max	Marks Scored	Max	Min	Marks Scored					
2	3	4	5	6	7	8	9	10	11	12	13	14
2.1 A	80	42	20	09	100	50	51	-	51	01	50	Passes
2.2 B	80	40	20	08	100	50	48	02	50	-	50	Passes
2.3 C	80	43	20	06	100	50	49	01	50	-	50	Passes
2.4 D	80	41	20	10	100	50	51	-	51	01	50	Passes
2.5 E1(P)	-	-	50	22	50	25	23	02	25	-	25	Passes
2.6 E2(P)	50	24	-	-	50	25	24	-	24	-	24	Fails

Note: For practicum with a total of 100 marks, 2 GM can be given to E1 or to E2. Total GM should not exceed 2.

Regulation 11.2 Illustration – 1 (Semester I to IV)

Paper No./ Title	Theory / Practical		IA/Viva		Total			Grace Marks (GM)	Total after adding (GM)	Net ded	Total after net ded (Final total)	Remarks
	Max	Marks Scored	Max	Marks Scored	Max	Min	Marks Scored					
2	3	4	5	6	7	8	9	10	11	12	13	14
1.1 A	80	42	20	09	100	50	51	-	51	01	50	Passes
1.2 B	80	43	20	08	100	50	51	-	51	01	50	Passes
1.3 C	80	39	20	08	100	50	47	03	50	-	50	Passes
1.4 D	80	40	20	11	100	50	51	-	52	01	50	Passes
1.5 E	80	45	20	10	100	50	55	-	55	-	55	Passes

Note: Under Regulation 11.2, 5 marks can be added to any paper (including practicals of 50 marks each i.e. a candidate scoring 20 out of 50 can get 5 GM in practicals)

Regulation 11.3 Illustration – GRACING FOR CLASS DECLARATION

Total Marks: 2000

Maximum Gracing Allowed: 04

For	Minimum Marks Required	Marks Secured	Grace marks	Total after adding grace marks	Remarks
First Class	1200	1199	02	1200	First Class
		1195	-	1195	Second Class
First class with Distinction (70% & above)	1400	1397	03	1400	First class with Distinction



MASTER OF SCIENCE (Speech-Language Pathology)
INTEGRATED SEMESTER SCHEME (MODEL QUESTION PAPER PATTERN)
(All Units are Compulsory)

Paper Title:

Max. Marks 50

Paper Code:

Unit No.	Question Number	Question/s	Marks	
I	1(a)	Axxxxxxxxxxxxxxxxxxxxxxxx	10	
	(b)	Bxxxxxxxxxxxxxxxxxxxxxxxx	06	
	2(a)	OR		
		(b)	Cxxxxxxxxxxxxxxxxxxxxxxxx	08
	(b)	Dxxxxxxxxxxxxxxxxxxxxxxxx	08	
II	3(a)	Exxxxxxxxxxxxxxxxxxxxxxxx	07	
	(b)	Fxxxxxxxxxxxxxxxxxxxxxxxx	09	
	4(a)	OR		
		(b)	Gxxxxxxxxxxxxxxxxxxxxxxxx	12
	(b)	Hxxxxxxxxxxxxxxxxxxxxxxxx	04	
III	5(a)	Ixxxxxxxxxxxxxxxxxxxxxxxx	04	
	(b)	Jxxxxxxxxxxxxxxxxxxxxxxxx	04	
	(c)	Kxxxxxxxxxxxxxxxxxxxxxxxx	08	
	6(a)	OR		
(b)		Lxxxxxxxxxxxxxxxxxxxxxxxx	06	
	(b)	Mxxxxxxxxxxxxxxxxxxxxxxxx	10	
IV	7(a)	Nxxxxxxxxxxxxxxxxxxxxxxxx	05	
	(b)	Oxxxxxxxxxxxxxxxxxxxxxxxx	03	
	(c)	Pxxxxxxxxxxxxxxxxxxxxxxxx	08	
	8(a)	OR		
(b)		Qxxxxxxxxxxxxxxxxxxxxxxxx	10	
	(b)	Rxxxxxxxxxxxxxxxxxxxxxxxx	06	
V	9(a)	Sxxxxxxxxxxxxxxxxxxxxxxxx	08	
	(b)	Txxxxxxxxxxxxxxxxxxxxxxxx	08	
	10(a)	OR		
(b)		Uxxxxxxxxxxxxxxxxxxxxxxxx	09	
	(b)	Vxxxxxxxxxxxxxxxxxxxxxxxx	07	

Regulation No.9.5a: For a theory paper carrying 50 marks, each full question shall carry 10 marks with internal division like, 8+2, 6+4, 5+5, 5+3+2 and so on. Maximum number of subdivision in a question shall be THREE.

REGISTRAR

VICE-CHANCELLOR



**MASTER OF SCIENCE IN SPEECH-LANGUAGE PATHOLOGY
I Semester**

LA 010: RESEARCH METHODS IN SPEECH-LANGUAGE & HEARING

Unit 1

- . Review of basic research methods, strategies & designs in sp-lang pathology & audiology
- . Types of research in speech language pathology and audiology. ex-post facto research, normative research, standard group comparison, experimental research, clinical & applied research, sample surveys, evaluation research
- . Methods of observation & measurement in speech language pathology & audiology.

Unit 2

- . Experimental designs - The structure & logic of experimental designs, single subject designs & group designs
- . Documentation (a) Organization, format & writing style. (b) Legal, ethical & cultural considerations for research in speech language pathology & audiology.

Unit 3

- . Review of studies in speech & hearing as established in standard journals. Critical analysis of methods employed and identification of models of research that may unique to different areas.

Unit 4

- . Evolution of research methods in speech & hearing since 1920s.

Unit 5

- . Methods of experimental research in allied areas – linguistics, neurology, clinical psychology, genetics, physics & acoustics and their application to speech & Hearing.
- . Epidemiological research in speech and hearing.

LA 020: STATISTICS IN SPEECH-LANGUAGE & HEARING

Unit 1

- . Review of basic statistics, statistical measures & their features
- . Statistical inference: Methods of correlation & regression, cause & effect relation, chi-square, population estimate, probability, probability laws & hypothesis testing. The concept, theoretical distributions, estimation – point & interval estimation. Application to speech-language pathology & audiology with specific examples.

Unit 2

- . Analysis of variance & covariance (ANOVA & ANCOVA): Basic models, assumptions, one way & two way classifications. Need for non-parametric tests. Consequence of failure of assumptions underlying ANOVA. Tests for additivity, homogeneity, transformation. Post – hoc tests analysis of covariance. Repeated measure
- . Correlation, regression analysis and prediction including multiple regression & path analysis.

Unit 3

- . Non-parametric statistics: Non-normal distributions, central limit theorem.

Unit 4

- . Analysis of qualitative data: Contingency tables, measures of association, Kappa coefficient, log linear models. Content analysis.

Unit 5

- . Multivariate analysis: Need for multivariate analysis, various methods, principal component analysis, factor cluster, discriminant function, MANOVA, MANCOVA, multiple regression & path analysis, logistic regression multidimensional scaling.



LA 030: TECHNOLOGY FOR SPEECH-LANGUAGE & HEARING

Unit 1 - Introduction to Basic Electronics and Computers

- . Basic principle of operation & working of – (a) Diodes, Transistors, FET's & UJT's, LED's, LCD's & IC's (b) D.C. Power supplies, a-c Voltage stabilizers & UPS
- . Fundamentals of Digital Electronics – (a) Binary number system, Hex code, ASCII code, bit, byte, etc (b) Logic gates, Counters, Flip-flops etc.
- . Fundamentals of Computers – (a) Block Diagram of a computer & its working (b) Hardware, memory devices & other peripherals (c) Operating system, languages, application software (d) Programs, Flow charts (e) Internet & networking of computers

Unit 2 - Fundamentals of Digital Signal processing & Communication systems

- . Analog & Digital systems – (a) Analog signal & Digital Signals (b) Analog to Digital & Digital to analog converters (c) Need & advantages of digital systems & digital signal processing
- . Principles of digital signal processing – (a) IIR system, its realization & implication (b) FIR system, its realization & implication (c) Basics of IIR & FIR filters & their implementation
- . Fundamentals of communication systems – (a) AM transmission & reception (b) FM transmission & reception (c) Digital modulation Techniques such as delta modulation, PCM, PPM, PWM & their application in speech analysis (d) Satellite communication

Unit 3 - Biomedical signals & Signal Processing

- . Principles of generation of acoustic stimuli – (a) Pure tones, tone bursts, clicks, filtered clicks & warble tones (b) Acoustic/Physical characteristics of all stimuli (c) Generation gating & filtering of stimuli
- . Evoked potential – (a) Working principle (b) Electrodes (c) Recording of responses
- . Electrodes & transducers – (a) Signal acquisition techniques from electrodes & transducers (b) Signal processing techniques such as differential amplification, common mode rejection, artifact rejection, filtering, signal averaging etc. (c) Addition & subtraction of waves

Unit 4 - Technology of Hearing Aids & Speech Processing and Analysis

- . Principle & working of – (a) Body level hearing aid (b) BTE hearing aid (c) Digital, DSP based/programmable hearing aids (d) FM hearing aid
- . Evaluation of hearing aids – (a) Electro acoustic characteristics (b) National & International standards (c) Hearing aid evaluation systems
- . Techniques of speech processing and analysis – (a) Voice response system (b) Speaker recognition system & speech recognition system (c) Speech synthesis methods

Unit 5 - Advanced Technology for Speech & Language Disorders

- . Electrophysiological methods in diagnosis- (a) Fundamental principles of EEG (b) Fundamental principles of EMG
- . Neuro-radiological methods in diagnosis (a) Working principles (b) Interpretation & implications
- . Tools/studies to understand the organization of speech & language disorders & functions - (a) Cortical blood flow studies (b) Radio imaging techniques, functional MRI (c) Application of tools in studying genetic bases of speech language disorders

LA 040: NEUROBIOLOGY OF SPEECH & LANGUAGE

Unit 1

- . Anatomy & physiology of the cranial nerves related to speech & language
- . Neuroanatomical & neurophysiological correlates of speech & language including subcortical mechanisms in (a) Normals- children & adults (b) Persons with language disorders-children & adults



Unit 2

- . Cognitive psychology: Information processing & electrophysiological basis memory & attention processes & its implications for speech and language disorders.

Unit 3

- . Investigative procedures for assessment of speech & language mechanisms (a) Neurological status (b) Biological status

Unit 4

- . Role of neurotransmitters in the mediation of speech & language.

Unit 5

- . Neurobiology of aging and its effect on speech & language.

LA 050: CLINICAL LINGUISTICS & MULTILINGUAL ISSUES IN COMMUNICATION

Unit 1

- . The Scope of Clinical Linguistics – Principles of General Linguistics and their Clinical Relevance.

Unit 2

- . Phonology – General concepts of segmental & non-segmental phonology – theoretical background – phonological acquisition, phonological disability. clinical application of distinctive feature analysis principles, practice and clinical application of phonemic analysis.
- . Grammar – Theoretical background, general concepts of syntax & morphology. The scope of grammatical analysis, grammatical acquisition, grammatical disability. Principles, practice and application of morphemic analysis in a clinical situation.

Unit 3

- . Semantics – Theoretical background, traditional semantics, linguistic semantics, the structure of mental lexicon, semantic fields, structural semantics – synonymy, hyponymy, opposition syntagmatic relations, componential analysis, non-lexical semantics – phonetic meaning, phonological meaning, grammatical meaning, semantic acquisition, semantic features, acquisition of meaning, types of semantic disability, semantic analysis of disordered speech and language.
- . Pragmatics – theoretical background pragmatic ability in normal pragmatic disability and their types.

Unit 4

- . Issues in socio-linguistics – standard & non-standard dialects, regional & social dialects, stylistic variation of language, gender & language, registers, creates, pidgins, relation between language culture, religion, politics, etc., language deficiency.

Unit 5

- . Multilingual & cultural issues – a brief introduction to the major language families of the world – language families & major languages of India. Linguistic determinism, linguistic relatively, Sapir-Whorf hypothesis. Cultural diversity of India, cultural issues in verbal & non-verbal communication. Multicultural & multilingual issues in rehabilitation with special reference to India.

M.Sc (Speech-Language Pathology) II Semester

LB 010: SPEECH PRODUCTION

Unit 1

- . Acoustics of speech: Acoustic phonetics: Basics, acoustics of vowels - Review & state-of-the-art, Acoustics of consonants: Review & state-of-the-art



Unit 2

- . Spectrography - Basics, place identification, manner identification, voicing identification, aspiration identification

Unit 3

- . Infant cry analyses, analyses of laughter, spectrography in normal subject. Spectrographic patterns in clinical population: Disorder of voice, phonology & fluency, forensic application, applications of spectrography in basic & applied research

Unit 4

- . Physiology of speech – (a) Physiology of respiration: Purpose of respiration, description of respiratory movements, types of respiration, methods of respiratory analysis (b) Physiology of laryngeal function: Historical remarks, muscles of the larynx, Laryngeal movements, vocal resonance (c) Neurophysiological bases of speech: Neuromotor mechanism of the articulatory, phonatory & respiratory systems, electrophysiology of the larynx.

Unit 5

- . Aerodynamics of speech production: Upper airway dynamics, lower airway, dynamics, aerodynamics of vowels, aerodynamics of consonants: stops, fricatives, nasals.

LB 020: MAXILLOFACIAL ANOMALIES AND PHONOLOGICAL DISORDERS

Unit 1

- . Coarticulation – Nature, definitions, kinds (anticipatory, carry over) - Models (feature based, syllabic and allophonic based, target based, phonologically based) – Physiological studies on coarticulation, effects of coarticulation (position and juncture effect, feature effect, transition effect, direction effect).

Unit 2

- . Theories of phonological development
- . Application of phonological theories in evaluation & management of phonological disorders.
- . Metaphon theory & therapy
- . Metalinguistic abilities in phonological disorders
- . Application of metaphon theory to the rehabilitation of phonological disorders.

Unit 3

- . Phonological process – different types, its analysis and phonological process pattern in various communication disorders

Unit 4

- . Anatomy, physiology and embryology of the maxillofacial region.
- . Anomalies related to various articulators & compensatory articulation
- . Velopharyngeal dysfunction – types, assessment and remediation.

Unit 5

- . Rehabilitation in maxillofacial anomalies – medical, surgical, prosthesis and speech therapy.
- . Acoustical, perceptual & physiological aspects of articulation in subjects with (a) cleft palate (b) glossectomy & mandibulectomy (c) hearing impaired subjects.
- . Coarticulation in speech disorders – measurement of coarticulation and remediation.



LB 030: LANGUAGE, COGNITION AND BRAIN

Unit 1

- . Language, cognition & Brain (a) Inter-relationships between language, cognition & brain: neurolinguistics & neural models (b) Cognitive models of language function (c) Neuroanatomical correlates of cognition and language

Unit 2

- . Cognitive processes in the acquisition & disorders of language – (a) Role of attention (b) Memory (short-term, verbal, non-verbal) (c) Reasoning, judgement & metacognition.

Unit 3

- . Language & cognition – its relationship with aging.

Unit 4

- . Assessment of cognitive processes with reference to language function.

Unit 5

- . Team intervention for cognitive & communicative rehabilitation – (a) Effects of surgical, pharmacological & electrophysiological treatment on language & cognition (b) Cognitive/metacognitive therapy with reference to language functions.

LB 040: CHILD LANGUAGE DISORDERS

Unit 1

- . Current theories of language acquisition
- . Models of language acquisition and their applications in child language disorders.
- . Psycholinguistic, neurolinguistic and cognitive processes in child language disorders.

Unit 2

- . Developmental and acquired language disorders in children- Linguistic, pragmatic, prosodic, behavioral and literacy characteristics in children with: (a) Mental Retardation (b) Hearing Impairment (c) Autism and Pervasive Developmental disorders (d) Specific Language Impairment (e) Aphasia (f) Dyslexia (g) Attention Deficit Hyperactivity Disorders (h) Seizure and other related disorders

Unit 3

- . Co-morbidity of child language disorders – Differential diagnosis & assessment of: (a) Cognitive – linguistic (b) Psycholinguistic & (c) Neurolinguistic parameters.

Unit 4

- . Management- medical, surgical, linguistic, behavioral, remedial, physio-occupational & special educational perspectives.

Unit 5

- . Present status & prospects of child language disorders.



M.Sc (Speech-Language Pathology) III Semester

LC 010: FLUENCY AND ITS DISORDERS

Unit 1

- . Definitions, factors affecting development of and dimensions of fluent speech
- . Physiological, linguistic, prosodic basis of fluency & its disorders.
- . Auditory processing in fluency and its disorders.

Unit 2

- . Articulatory dynamics in fluency disorders.
- . Laryngeal dynamics in fluency disorders.

Unit 3

- . Neurological processing in fluency disorders - Speech motor control in fluency disorder.

Unit 4

- . Prevention, relapse of stuttering & related issues.
- . Theories & therapies of fluency disorders - Recent advances.
- . Severity of stuttering - Theoretical foundations & methods.

Unit 5

- . Cluttering - Recent advances.
- . Efficacy of stuttering therapies.

LC 030: SPEECH & LANGUAGE PROCESSING

Unit 1 - Speech Processing

- . Introduction to speech perception
- . Basic issues in speech perception: (a) Linearity, segmentation, lack of invariance (b) Units of perceptual analysis: phoneme, syllable, word or beyond (c) Variability or perceptual constancy in speech (d) Perceptual organization of speech
- . Theoretical approaches to speech perception – (a) Invariant feature or cue-based approaches (b) Motor theory of speech perception (c) Direct-realistic approach to speech perception (d) TRACE

Unit 2

- . Phonetic perception: perception of vowels, stop consonants, nasals, fricatives and other speech sounds.

Unit 3

- . Spoken word recognition – Methodology and issues

Unit 4

- . Visual word recognition – (a) Models & theories (b) Word & non- word naming (c) Acquired dyslexia (d) Role of phonology

Unit 5

- . Sentence comprehension – (a) Basic capacities for perceiving phonetic contrasts: native language contrasts, foreign language contrasts, coping with variability in speech signal, role of memory & attention in infant speech perception (b) Prosodic organization in native language (c) Related developments in speech perception and speech production
- . Processing of phonological, morphological, syntactic, semantic & pragmatic aspects of language.



LC 030: APHASIA

Unit 1

- . Classification systems in Aphasia - Cortical v/s subcortical types - Traditional v/s linguistic approaches

Unit 2

- . Linguistic impairments in Aphasias - Phonological deficits, semantic deficits, agrammatism & paragrammatis
- . Non-linguistic impairments in aphasias

Unit 3

- . Investigative & assessment procedures in clinical aphasiology – (a) Language tests (b) Linguistic analysis-subjective/objective tests (c) Functional profiles.

Unit 4

- . Management of aphasia - Neurological, linguistic & communicative, physiotherapeutic, vocational & social aspects.

Unit 5

- . Aphasia in multilinguals, illiterates, left-handers & sign language users, right hemisphere disorders, schizophasia, traumatic brain injury (TBI), primary progressive aphasias (PPA) & language disorders.

LC 040: VOICE AND ITS DISORDERS

Unit 1

- . Vocal fold physiology, neurophysiology of the Larynx, vibratory modes of vocal folds
- . Models of vocal fold vibration - one-mass model, two-mass model, multiple mass model
- . Development of the vocal fold
- . Mechanical properties of the vocal fold
- . Measurement of vocal fold vibration
- . Electroglottography in understanding the movements of the muscles of vocal folds.

Unit 2

- . Voice evaluation: Aerodynamic tests - vital capacity, mean airflow rate, maximum duration of sustained blowing.
- . Tests for assessing functions of the resonatory system, acoustic analysis, psychoacoustic evaluation and tests for laryngeal measurements (Modal frequency, frequency range, Jitter, Intensity, Intensity range, Shimmer, Glottogram, Harmonic analysis) and other measures (LTAS, Nasality Measurements).

Unit 3

- . Pathophysiological changes in different voice disorders.
- . Acoustical, aerodynamic & perceptual aspects of pathological voices.

Unit 4

- . Ageing and voice disorders. Management.
- . Neurogenic voice disorders. Differential diagnosis and management.
- . Endocrinal voice disorders & voice disorders related to transsexuals.
- . Rehabilitation of laryngectomee – Recent advances.
- . Acoustical, perceptual & physiological aspects of laryngectomee speech.



Unit 5

- . Issues related to professional voice and its care.
- . Medical and surgical intervention in voice disorders.
- . Vocal rehabilitation

LC 060: MOTOR SPEECH DISORDERS

Unit 1

- . Sensory motor processing in speech / correlates of oral sensor- motor dynamics – (a) Neural substrates (b) Findings in dysarthrics and apraxics.

Unit 2

- . Models of speech processing in motor speech disorders – Dysarthria and apraxia.

Unit 3

- . Motor speech disorders in children & adults – Dysarthria & Apraxia - types, assessment & remediation.
- . Differential diagnosis between age related changes and motor speech disorders.

Unit 4

- . Dysphagia in children & adults with motor speech disorders – Types, assessment & remediation

Unit 5

- . Prosthetic, medical & surgical management in neurogenic speech disorders.
- . Speech remediation in dysarthria & apraxia – (a) Issues related to vegetative therapy/sensory motor training for oral musculature (b) Principles of physiotherapy & occupational therapy in speech therapy (c) Speech correction – other facilitatory approaches & compensatory approaches.
- . Alternate modes of remediation of motor speech disorders.



M.Sc (Speech-Language Pathology) IV Semester

LD 010: ADULT LANGUAGE DISORDERS

Unit 1

- . Non-aphasic language disorders in adults-causes, types, characteristics & classification of: (a) Traumatic Brain Injury (b) Dementia (c) Acquired Dyslexias (d) Alcohol induced language disorders (e) Metabolic disorders of language

Unit 2

- . Cognitive-linguistic–communicative impairments in non-aphasic language disorders in adults

Unit 3

- . Differential diagnosis of non-aphasic language disorders in adults on the basis of neurodiagnostic, cognitive, linguistic, communicative speech - motor and behavior deficits.

Unit 4

- . Assessment of non-aphasic language disorders in adults-procedures for neurological, cognitive - linguistic, communicative, speech motor and behavioral measurements.

Unit 5

- . Management of non-aphasic language disorders in adults-Interdisciplinary approach – (a) Pharmaco-therapy (b) Behavior therapy (c) Physiotherapy (d) Cognitive and communicative rehabilitation procedures.

LD 020: ALTERNATIVE & AUGMENTATIVE COMMUNICATION

Unit 1

- . AAC – Introduction/overview
- . AAC system components – Symbol sets – Standardized & non-standardized, techniques for training, selection of modes, partnership issues and generalization.

Unit 2

- . Assessment & decision making – Different types of assessment & applicability with different speech-language disorders
- . Vocabulary selection/language & oral/motor considerations & general intervention principles in different types of speech-language disorders.

Unit 3

- . AAC intervention for children & adults with communication disorders – Type specific selection considerations.

Unit 4

- . Processing of signals, signs & symbol sets in normals and AAC users.
- . Relevance of electronics & computers – General orientation & adaptation in Indian context.

Unit 5

- . Team effort in the implementation of AAC.
- . AAC in Indian context.



LD 060: SUPRASEGMENTAL AND MUSIC ACOUSTICS

Unit 1

- . Introduction to musicology – Definition, components of music – rhythm, melody, harmony & tone. Types – instrumental, vocal, classical, non-classical, Western and Indian. Scales of measurements. Prerequisites – individuality, personality, artistry & perception.

Unit 2

- . Singing – Physiology of singing – respiratory & phonatory bases of singing, posture, resonance and articulation
- . Vocal problems in singers – causes, prevention, remediation, vocal hygiene, vocal exercises.

Unit 3

- . Intonation – definition, types, factors affecting development of intonation in children, tests of intonation.
- . Stress - definition, development, types (syllable-timed, stress – timed, syllable, word), use of stress, physiology of stress, development of stress, correlates of stress, measurement of stress.
- . Rhythm - definition, development, isochrony, measurement of rhythm, rhythm in various languages, tests of rhythm, rhythm in stuttering.

Unit 4

- . Neural basis of Suprasegmentals & dysprosody - Processing of prosodic features, hemispheric lateralization, types of dysprosody in various disorders

Unit 5

- . Suprasegmental features in different types of speech & language disorders – Multi-lingual & cultural variations



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LA 020: STATISTICS FOR SPEECH-LANGUAGE AND HEARING

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LA 040: NEUROBIOLOGY OF SPEECH AND LANGUAGE

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II Semester**

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LB 030: LANGUAGE COGNITION AND BRAIN

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LB 040: CHILD LANGUAGE DISORDERS

Unit 1

- Nelson N.W. (1998). Childhood language disorders in contest-infancy through adolescence. Allyn and Bacon, Boston
- Ritchie, W.C. and Bhatia, T.K. (1999). Handbook of child language acquisition. Academic press, NY.

Unit 2

- Adler, S & King, D.A (1994). Oral communication problems in children and adolescents, Allyn and Bacon, Boston.
- Andrey L Holland (Ed) (1984). Language disorders in children – recent advances College Hill Press, California
- Burack, J.A.et. al., (ed) (1998). Handbook of Mental Retardation and Development. Cambridge University
- Fay, W.H. and Schuler, A.L. (1980). Emerging language in autistic children. Edward Arnold, London.
- Leonard, L.B (1999) Children with Specific Language Impairment, MIT press, Cambridge
- Peters, T. (1997). Autism-from theoretical understanding to educational intervention. Singular publishing group inc., San Diego
- Rondal, J.A & Edwards, S (1997). Language in Mental retardation. Singular publishing co.San Diego

Unit 3

- Gallagher, T.M. (1991). Pragmatics of language- Clinical practice issues, Singular publishing co., California.
- Johnston, R.E (1991). Attention deficits, learning disability and Ritalin- a practical guide, Singular publishing co., California.
- Jung, J.H. etal. (1989). Genetic syndromes in communication disorders. Pro-ed, TX.
- Law, J (1992). The early identification of language impairment in children: therapy in clinical practice. Chapman and Hall, N.Y.
- Zeigler, W and Deger, K (ed) (1998). Clinical phonetics and linguistics. Whurr pub, London.

Unit 4

- Adler, S (1979). Interdisciplinary language intervention programme for the retarded.
- Shprintzen, R.J. (1997). Genetics, syndromes and communication disorders. Singular publishing inc. London.

Unit 5

- Crystal (1976). Child language, learning and linguistics-an overview for teaching and therapeutic professions. Edward Arnold, London.
- Crystal (1977). Grammatical analysis of language disability-a procedure for assessment and remediation. Edward Arnold, London.
- Fey M. E et al. (1995). Language intervention-preschool through elementary years. Communication and language intervention series, Vol-5, Paul H Brookes publishing co, Baltimore
- Fey, M (1986). Language intervention with young children, San Diego, College – Hill Press.
- Rass-Swain, (1992). Cognitive and linguistic improvement program, singular publishing co., California.



M.Sc – III Semester

LC 010 – FLUENCY AND ITS DISORDERS

- . Austin, L. and Others (Ed.) (1991): Progress in the treatment of fluency disorders. Whurr Publishers, London.
- . Bloodstein, O. (1993): Stuttering. Allyn and Bacon, Boston.
- . Conture (1990): Stuttering. Prentice Hall, New Jersey.
- . Corder, Akingham, R.J. (1998): Treatment efficacy for stuttering. Singular Publishing Group, San Diego.
- . Curlee (1993): Stuttering and related disorders of fluency. Thieme Medical Publisher, New York.
- . Curlee and Perkins (Ed.). (1985): Nature and treatment of stuttering. Taylor and Francis, London.
- . Dalton, hard castle, W.J. (1993): Disorders of fluency. Whurr Publishes, London.
- . Fawcus, M. (1995): Stuttering. Whurr Publishers, London.
- . Ham, R.E. (1990): Therapy of stuttering pre-school through adolescence. Prentice Hall, Englewood-Cliffs.
- . Lass, N.J. (Ed.) (1979): Speech and language advances in basic research and practice. Academic Press, New York, Vol.1 – Vol.9.
- . Myers, (1992): Cluttering. Kibworth, Far Communication.
- . Perkins, W. L. (1992): Stuttering prevented. Whurr Publishers, London.
- . Peters and Hulstijn, W (Ed.) (1987): Speech motor dynamics in stuttering. Springer-Verlag, New York.
- . Peters, H.F.M. and others (Ed.) :(1991). Speech motor control and stuttering. Excerpta medicals, Amsterdam.
- . Riley (1981). Stuttering prediction instrument for young children. Pro.Ed. Austin.
- . Riley (1986). Stuttering severity instrument for children and adults. Pro.Ed. Austin.
- . Rustin, L. and others (1996). Assessment and therapy for young dysfluent children. Whurr Publishers, London.
- . Starkweather, D. (1987). Fluency and stuttering. Prentice-Hall, New Jersey.
- . Silverman, F.H. (1992). Stuttering and other fluency disorders. Prentice Hall, Inglewood Cliffs.
- . St. Louis (1986). Atypical stutter. Orlando, Academic Press.
- . Starkweather, C.W. and others (1990): Stuttering prevention. Inglewood Cliffs, Prentice-hall.
- . Weiss (1964). Cluttering. Prentice Hall, New Jersey.
- . Wells (1987). Stuttering treatment. Prentice-Hall, New Jersey.

LC 020: SPEECH AND LANGUAGE PROCESSING

Unit 1 and 2

- . Borden, G. J. and Harris, K.S. (1980). Speech science primer: Physiology, Acoustics and Perception of speech. Williams and Wilkins, London.
- . Kuhl, P.K. (1982). Speech perception: An overview of current issues. In N. J. Lass, L.V. McReynolds, L.V., Northern J.L., and Yoder D.E. (Eds.), Speech, Language and Hearing. Vol. I, Normal Process, W.B. Sanders Company, Philadelphia.

Unit 3

- . Sanders D.A. (1977). Auditory perception of speech - An introduction to principle and problems. Prentice Hall, New Jersey.
- . Stevens, K.N., & Blumstein, S.E. (1981). The search for invariant acoustic correlates of phonetic features. In P.Eimas and J.L.Miller (Eds.), Perspectives on the study of speech. Lawrence Erlbaum Associates, New Jersey.

Unit 4

- . Summerfield, A.Q. (1983). Audio-visual speech perception, lip reading, & artificial stimulation. In M.E. Lutman, M.P.Haggard (Eds.), Hearing science & Hearing disorders. Academic Press, London.
- . Wathen-Dunn, W. (Ed.) (1967). Models for the perception of speech and visual form. Proceedings of a symposium, The MIT Press, Cambridge.



Unit 5

- Levinson, P.J & Sloan, C (1980) Auditory processing and language-clinical and research perspectives, Grune and Stratton, New York.

LC 030: APHASIA

Unit 1

- Hegde, M.N. (1994). A course book on aphasia and other neurogenic language disorders, Singular publishing group, San Diego.
- Kertesz, A (1979). Aphasia and associated disorders – Taxonomy, localization and recovery. Grune and Stratton, NY.

Unit 2

- Caplan, D. (1990). Neurolinguistics and linguistic aphasiology – An introduction. Cambridge University Press
- Code, C & Muller, D.J (1996). Forums in clinical aphasiology. Whurr Pub, London.
- Lesser, R (1989). Linguistic investigations of aphasia – Studies in disorders of communication

Unit 3

- Dressler, W & Stark J.A. (Ed.) (1988). Linguistic analyses of aphasic language. Springer series in Neuropsychology, Springer-Verlag, NY

Unit 4

- Dworkin, J.P & Hartman, D.E (1994). Cases in neurogenic communication disorders – A workbook. Singular Publishing Group, Inc, San Diego

Unit 5

- Rose, Whurr and Wyke (ed) (1993). Aphasia. Whurr Pub., London.
- Ziegler, W and Deger, K (ed) (1998). Clinical phonetics and linguistics. Whurr pub, London.

LC 040: – VOICE AND ITS DISORDERS

- Baer, T. etal. (Eds.) (1991). Laryngeal function in phonation and respiration. Singular Publishing Group, San Diego.
- Baken, R.J. (1987). Clinical measurements of Speech and Voice. Taylor and Francis, London
- Boone, D.R. (1991). Is your voice telling on you? How to find and use your natural voice? Singular Publishing Group, San Diego.
- Davies, D.G. and Jahn, A.F. (1998). Care of the professional voice: A management guide for singers, actors and professional voice users. Butterworth Heinemann, Oxford.
- Davis, P.J. and Fletcher, N.H. (1996) (Eds.). Vocal fold physiology: controlling complexity and chaos, Singular Publishing Group, San Diego.
- Dejonckere, P.H. etal. (1995). Vibrato. Singular Publishing Group. San Diego.
- Fujimura, O. (1988) (Ed.). Vocal fold physiology: Vol. 2. Vocal physiology: Voice production mechanisms and functions, Raven Press, New York
- Fujimura, O. and Hirano, M. (1995). Vocal fold physiology: Voice quality control. Singular Publishing Group, San Diego.
- Gauffin, J. and Hammarberg, B. (1991) (Eds.). Vocal fold physiology: acoustic, perceptual and physiological aspects of Voice mechanisms. Whurr Publishers, London.
- Kent R D, Atal, B.J. & Miller, J. L. (1990), Papers in speech communication, speech productionm, Acoustical Society of America, New York.
- Lass, N.J. (1979-84). (Eds) Speech and language: Advances in basic Research and Practice. Vol 1-8. Academic Press, New York.
- Lass, N.J. (1979-84). (Eds) Speech and language: Advances in basic Research and Practice. Vol 1-8. Academic Press, New York.



- Orlikoff, R.F. & Baken, R.J. (1993). Clinical speech and voice measurements: Laboratory exercises. Singular Publishing Group, San Diego.
- Titze, I.R. (Ed.) (1993). Vocal fold physiology. Frontiers in Basic Science. Singular Publishing Group, San Diego.

LC 060: MOTOR SPEECH DISORDERS

- Berry. W.R. (1983). Clinical dysarthria. College Hill Press, San Diego.
- Beresford. S. (1995). Motor neuron diseases. Chapman and Hall, London.
- Blosser. J.L and DePompei. R. (1994). Paediatric traumatic brain injury – Proactive intervention. Singular Publishing Group Inc, San Diego, California.
- Brookshire. R.H. (1992). An introduction to neurogenic speech disorders. Mosby Year Book, St. Louis..
- M.A. (1993). Developmental motor speech disorders. Singular Publishing Group Inc, Whurr Publishers, San Diego, California.
- Darby. J.K. (Ed.). (1981). Speech evaluation in medicine. Grune and Stratton, New York.
- Darby. J.K. (Ed.) (1981). Speech evaluation in psychiatry. Grune and Stratton, New York.
- Darby. J.K. (Ed.) (1985). Speech and language evaluation in neurology- adult disorders. Grune and Stratton, Orlando.
- Darley, R., Aronson. A and Brown.B. (1975). Motor speech disorders. W.B.Saunders Company, Pennsylvania.
- Denhoff. E. and Robinault. I.P. (1960). Cerebral palsy and related disorders - A developmental approach to dysfunction. McGraw Hill, New York.
- Dikeman. K.J and Kazandjian. M.S. (1995). Communication and swallowing management in tracheostomized and ventilator dependent adults. Singular publishing group, San Diego.
- Duffy. J.R. Motor speech disorders (1995). Mosby yearbook Inc., St. Louis.
- Dworkin. J.P. (1991). Motor speech disorders. A treatment guide. Mosby Year Book, St. Louis,
- Dworkin. J.P. and Hartman. D.E. (1994). Cases in neurogenic communication disorders – A workbook. Singular Publishing Group Inc, Whurr Publishers, San Diego, California.
- Edward. M. (1984). Disorders of articulation. Aspects of dysarthria and verbal dysphasia. Springer Verlag, New York.
- Grillner. S. Lindblom (Eds) (1982). Speech motor control. Pergamon Press, Oxford.
- Hall. P.K., Jordon. L.S and Robin. D.A. (1993). Developmental apraxia of speech-theory and clinical practices. Pro-Ed., Austin.
- Hardy. J.C. (1983). Cerebral palsy. Prentice Hall Inc, New Jersey.
- Johns. D.F. (Ed.). Clinical management of neurogenic communicative disorders. Allyn and Bacon, Boston, 1985.
- Joseph. R. (1996). Neuropsychiatry, neuropsychology and clinical neuroscience. Williams and Wilkins, U.S.A.
- Kurlan. R. (1998). Handbook of Tourette's syndrome and related tic and behavioral disorders. Marcel Dekker Inc., New York.
- Kuehn. D.P. Lemme and Baumgartner (Ed.) (1989). Neural basis of speech, hearing and language. College Hill Press, Boston.
- Langley. B. and Lombardino. L.J. (Ed.). (1991) Neuro developmental strategies for managing communication disorders in children with severe motor dysfunction.
- Lass, N.J (1979). Speech and language. Advances in basic research and practice. Vol.1-11, Academic Press, New York.
- Leonard. R & Kendall. K. (1997) Dysphagia assessment and treatment planning – A team approach. Singular publishing group Inc.
- Love. R.J. and Webb. W.G. (1992). Neurology for the speech, language pathologist. Butterworth-Heinemann, Boston.
- McNeil. M.R. (Ed.). (1984). The dysarthrias. College Hill Press, San Diego.
- Murdoch. B.E. (1990). Acquired speech and languages disorders. Chapman & Hall, London.
- Netsell. R. (1986). A neurobiologic view of speech production and the dysarthrias. College Hill Press, San Diego.
- Periman A.L. and Delrieu (Eds.) (1997). Deglutition and its disorders – anatomy, physiology, clinical diagnosis and management. Singular Publishing Group Inc, Whurr Publishers, San Diego, London.



- Rosenthal, S.R. Sheppard and Lotze (Eds.) (1995). Dysphagia and the child with developmental disabilities. Singular Publishing Group Inc, Whurr Publishers, San Diego.
- Scherzer. A.L. and Tscharnuter. I. (1982). Early diagnosis and therapy in cerebral palsy primer on infant developmental problems. Marcel Dekker Inc, New York.
- Tuchman and Walter (Eds.). Disorders of feeding and swallowing in infants and children.
- Vaughn, G.R. and Clark, R.M. (1979). Speech facilitation. extra oral and intra oral stimulation techniques for improvement of articulation skills. Charles C Thomas, Springfield,
- Wertz. R.T. Lapointe and Rosenbek. (1991). Apraxia of speech in adults. Singular Publishing Group, San Diego.
- Yorkston. K.M. Beukelman and Bell (1968). Clinical management of dysarthric speakers. Pro-ed, Austin.

M.Sc (Speech-Language Pathology) – IV Semester

LD 010: ADULT LANGUAGE DISORDERS

Common for all units

- Morris, J.C (ed) (1994). Handbook of Dementic illnesses. Marcel Dekker Inc., NY.
- Kirshner, H.S. (ed) (1995). Handbook of neurological speech and language disorders. Neurological diseases and therapy series Marcel Dekker, Inc, NY.
- Gillis, et. al., (1996). Traumatic Brain Injury- rehabilitation for Speech-Language pathologists. Butterworth-Heinemann
- Green et. al. (1997). Neurogenic communication disorders series. Singular pub co., London.
- Morantz, R.A. and Walsh, J.W. (ed) (1994). Brain Tumors- a comprehensive text. Marcel Dekker inc., NY.

Unit 1

- La Pointe, L (1990). Aphasia and related neurogenic language disorders. Current therapy of communication disorders. Series Editor William H Perkins, Thieme Medical Pub. NY

Unit 2

- Goodglass, H and Wingfield, A (ed) (1997). Anomia-neuroanatomical and cognitive correlates. Academic press, London.
- Morris, J.C. (ed) (1994). Handbook of dementic illnesses. Marcel Dekker Inc., NY.

Unit 5

- Dworkin, J.P & Hartman, D.E. (ed) (1994). Cases in neurogenic communicative disorders – A work book. Singular publishing group, Inc, San Diego, California.
- Johns, D.F. (ed) (1978). Clinical management of neurogenic communicative disorders. Little, Brown and Company, Boston.

LD 020: ALTERNATIVE & AUGMENTATIVE COMMUNICATION

- Beukelman. D.R., Yorkston. K.M. & Dowden.(1985) Communication augmentation - A case book of clinical management. Taylor and Francis, London.
- Enderby. P. (Ed.) (1987). Assistive communication aids. For the speech impaired. Churchill Livingstone Inc, New York.
- Glennen. S.L. & Decoste. D.C. (1997). Handbook of augmentative and alternative communication. Singular Publishing Group Inc, San Diego, London.
- Musselwhite. C.R. and Louis. K.W.(1988). Communicative programming for person with severe handicaps, Vocal and augmentative strategies. Pro-Ed, Texas.
- Silverman, F.H. (1980). Communication for the speechless. Prentice Hall Inc.
- Tetzohner. F.H. & Jansen. M.H. (Eds.) (1996). Augmentative and alternative communication – European perspectives. Singular Publishing Group Inc, San Diego, California.



- . Vander Heiden. G. and Grilley. K. (Ed.)(1978). Non-verbal communication techniques and aids for the severely physically handicapped. University Park Press, New York.
- . Webster J.G. (Ed.). (1995). Electronic devices for the communication handicapped. Chapman and Hall, London.

LD 060: SUPRASEGMENTALS AND MUSIC ACOUSTICS

Unit 1

- . Leeuwen, T. V. (1999). Speech, music and sound. Macmillan Press Ltd., Hong Kong.

Unit 2

- . Bunch, M. A. (1982). Dynamics of singing voice. Springer – Verlag/Wien, New York.
- . Proctor, D. F. (1980). Breathing, speech and song. Springer – Verlag/Wien, New York.

Unit 3

- . Johns – Lewis, C (1986) Intonation in discourse, College-Hill Press, Inc, San Diego

List of Journals for reference in subjects related to Speech-Language Pathology

Asia Pacific J of Speech, Language & Hearing
Brain
Brain & Language
Cleft Palate
Cortex
Edn & Tg in MR & Developmental Disabilities
Folia Phoniatica
International J of Language & Commn Disorders
J of Acoustical Society of America
J of Child Language
J of Communication Disorders
J of Fluency Disorders

J of Learning Disabilities
J of Speech, Language and Hearing Research
Journal of Voice
Language Learning
Language, Sp & Hg Services in School
Linguistics and Language Behavior Abstracts
Otolaryngologic Clinics of North America
Phonetica
Seminars in Speech & Language
Speech Communication
J of Medical Speech-Language Pathology

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