



**KARNATAK UNIVERSITY, DHARWAD**

# **04 - Year BASLP (Hons.) Program**

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## **SYLLABUS**

**Subject: Bachelor in Audiology and Speech Language**

**Pathology (BASLP)**

**[Effective from 2021-22]**

**DISCIPLINE SPECIFIC CORE COURSE (DSCC) FOR SEM I & II,**

**OPEN ELECTIVE COURSE (OEC) FOR SEM I & II and**

**SKILL ENHANCEMENT COURSE (SEC) FOR SEM I & II**

**AS PER N E P - 2020**

## Karnatak University, Dharwad

### Four Years under Graduate Program in Bachelor in Audiology and Speech- Language Pathology

Effective from 2021-22

| Sem No.   | DSC/ Type of Course | Theory/ Practical | Instruction per week | Total hours of Syllabus / Sem | Duration of Exam | Credit    | Marks                |                      |       |
|---|---------------------|-------------------|----------------------|-------------------------------|------------------|-----------|----------------------|----------------------|-------|
|   |                     |                   |                      |                               |                  |           | Summative assessment | Formative assessment | Total |
| <b>I</b>  | DSCT-1.1            | Theory            | 4                    | 56                            | 2                | 4         | 60                   | 40                   | 100   |
|   | DSCT-1.2            | Theory            | 3                    | 42                            | 2                | 3         | 60                   | 40                   | 100   |
|   | DSCT-1.3            | Theory            | 3                    | 42                            | 2                | 3         | 60                   | 40                   | 100   |
|   | OEC-1.1             | Theory            | 3                    | 42                            | 2                | 3         | 60                   | 40                   | 100   |
|   | SEC-SB-1.1          | Practical         | 1T+2P                | 32                            | 2                | 2         | 25                   | 25                   | 50    |
|   | SEC-VB-1.1          | ---               | 2                    | ---                           | -                | 2         | ----                 | 50                   | 50    |
|   | AECC-1.1            | Theory(L-1)       | 3                    | 42                            | 2                | 3         | 60                   | 40                   | 100   |
|   | AECC-1.2            | Theory (L-2)      | 3                    | 42                            | 2                | 3         | 60                   | 40                   | 100   |
|   | DSCP-1.4            | Practical         | 4                    | 52                            | 3                | 2         | 25                   | 25                   | 50    |
| <b>Total Credits</b>                                      |                     |                   |                      |                               |                  | <b>25</b> |                      |                      |       |
| <b>II</b>   | DSCT -2.1           | Theory            | 4                    | 56                            | 2                | 4         | 60                   | 40                   | 100   |
|   | DSCT -2.2           | Theory            | 4                    | 56                            | 2                | 4         | 60                   | 40                   | 100   |
|   | SEC-VB-2.1          | -                 | 2                    | ---                           | ---              | 2         | ----                 | 50                   | 50    |
|   | OEC-2.1             | Theory            | 3                    | 42                            | 2                | 3         | 60                   | 40                   | 100   |
|   | AECC-2.1            | Theory (L-1)      | 3                    | 42                            | 2                | 3         | 60                   | 40                   | 100   |
|   | AECC-2.2            | Theory (L-2)      | 3                    | 42                            | 2                | 3         | 60                   | 40                   | 100   |
|   | AECC-2.3            | Theory(EVS)       | 2                    | 30                            | 1                | 2         | 30                   | 20                   | 50    |
|   | DSCP-2.3            | Practical         | 4                    | 52                            | 3                | 2         | 25                   | 25                   | 50    |
|   | DSCP-2.4            | Practical         | 4                    | 52                            | 3                | 2         | 25                   | 25                   | 50    |
| <b>Total credits</b>                                      |                     |                   |                      |                               |                  | <b>25</b> |                      |                      |       |
| <b>Details of the other Semesters will be given later</b> |                     |                   |                      |                               |                  |           |                      |                      |       |

\* Student can opt digital fluency as SEC or the SEC of the program

**Name of Course (Subject): Bachelor in Audiology and Speech Language Pathology**

**Programme Outcome (PO):**

On completion of the 03/ 04 years Degree in Bachelor in Audiology and Speech Language Pathology students will be able to:

- PO1:** The BASLP program is best suited for individuals with a passion to work among the differently-abled people in society.
- PO2:** In this course, the students learn about the normal aspects and disorders of speech, language, swallowing, and hearing.
- PO3:** They develop the necessary skills for evaluating, diagnosing, and treating communication as well as swallowing disorders, under the supervision of qualified Speech-Language Pathologists (SLPs) and Audiologists.
- PO4:** The overall goal of BASLP is to optimize and enhance the ability of an individual to hear, speak, and communicate
- PO5:** Upon completion of this degree, students are qualified to work as audiologists and SLPs.
- PO6:** Audiologists provide a comprehensive array of professional services related to the prevention, identification, diagnosis, and management of auditory and balance-related disorders.
- PO7:** SLPs provide a diverse range of professional services related to the prevention, identification, diagnosis, and management of speech, language, and swallowing-related disorders.
- PO8:** Audiologists and SLPs may also engage in research pertinent to all of the above-mentioned domains.
- PO9:** Audiologists and SLPs may work in a variety of settings including but not limited to: health care settings, regular and special schools, rehabilitation centers, industrial settings, hearing aid and cochlear implant manufacturers, manufacturers of devices and prosthesis for individuals with communication and swallowing disorders, universities/colleges, and their clinics, professional associations, state/central government agencies and institutions, research centers and private practice settings.
- PO10:** To build confidence in the candidate to be able to work in the society and institution of higher education.

## B.Sc. Semester –I

The course Bachelor in Audiology and Speech- Language Pathology in I semester has five papers (Theory Paper –3 for 10 credits & Practical-2 for 4 credits) for 14 credits: All the papers are compulsory. Details of the courses are as under.

### BASLPDSCT-1.1 - Communication Sciences: Speech and Language

#### Discipline Specific Course (DSCT)

#### Course No.-1 (Theory)

| Course No. | Type of Course | Theory / Practical | Credits | Instruction hour per week | Total No. of Lectures/Hours / Semester | Duration of Exam | Formative Assessment Marks | Summative Assessment Marks | Total Marks |
|------------|----------------|--------------------|---------|---------------------------|--|------------------|----------------------------|----------------------------|-------------|
| Course-01  | DSCT           | Theory             | 04      | 04                        | 56hrs                                  | 2hrs             | 40                         | 60                         | 100         |

### BASLPDSCT-1.1 - Communication Sciences: Speech and Language

#### Course Outcome (CO):

After completion of course (Theory), students will be able to:

- CO 1 : Human Communication and processes involved
- CO 2 : language and linguistic aspect aspects of communication
- CO 3 : development of speech and language and communication skills
- CO 4 : basic concepts and terminologies related to speech and hearing
- CO 5 : Basic Concepts Related to Incidence and Causative Factors
- CO 6 : Basic concepts in speech, hearing language and communication

| <p style="text-align: center;"><b>Syllabus- Course 1(Theory)</b></p> <p><b>Course Title: BASLPDSCT-1.1 - Communication Sciences: Speech and Language</b></p>  | <p style="text-align: center;"><b>Total Hrs:40</b></p> |
|---|--|
| <p><b>Unit-I</b></p>  | <p style="text-align: center;"><b>10 hrs</b></p>       |
| <p>Basic Concepts in Speech, Language and Communication-</p> <p>1.1 Definitions of communication, speech, language and their components and functions</p> <p>1.2 Distinctions and similarities between communication, speech, and language</p> <p>1.3 Basic models, levels and modes, and functions of speech communication</p> <p>1.4 Speech chain, biological foundations of speech and language including speech as an overlaid function.</p> <p>1.5 Characteristics of speech- normal, clear, and abnormal</p> <p>1.6 Bases of speech – anatomical, physiological, neurological, physical, aerodynamic, linguistic, psychological, and socio-cultural including genetic bases.</p>  |  |
| <p><b>Unit-II</b></p>   | <p style="text-align: center;"><b>10hrs</b></p>        |
| <p>Normal Developmental Aspects-</p> <p>2.1 Normal development of speech and language</p> <p>2.2 Development of articulation</p> <p>2.3 Development of voice</p> <p>2.4 Development of fluency and prosody</p> <p>2.5 Prerequisites for and factors affecting - speech and language development</p>   |  |
| <p><b>Unit-III</b></p>  | <p style="text-align: center;"><b>10 hrs</b></p>       |
| <p><b>Basic Concepts Related to Incidence and Causative Factors-</b></p> <p>3.1 Definition: Speech-Language Pathology</p> <p>3.2 History and development of the profession of SLP including Indian context</p> <p>3.3 Role of Speech-Language Pathologists in various settings</p> <p>3.4 Causes of speech and language disorders</p> <p>3.5 Basic epidemiologic concepts and principles and data sources and measurements</p> <p>3.6 Population at risk for hearing loss and communication delay – at-risk children, established risk children, high-risk checklist.</p> <p>3.7 Incidence and prevalence of Speech-language and hearing disorders as per different census (NSSO, WHO, a different registry for various disorders, etc)</p> |  |

|  |              |
|--|--------------|
| <b>Unit-IV</b>   | <b>10hrs</b> |
| <p>Introduction to Speech-Language and Swallowing Disorders: Classification and Characteristics-</p> <p>4.1 Voice disorders- based on Pitch, Loudness, and Quality of voice</p> <p>4.2 Phonological disorders - Misarticulation, Apraxia, and Dysarthria</p> <p>4.3 Fluency disorders - stuttering, cluttering, neurogenic stuttering</p> <p>4.4 Language disorders – aphasia in children and adults, cerebral palsy, specific language impairment, and hearing impairment, Autism spectrum disorders, Learning disability, Intellectual disability.</p> <p>4.5 Feeding and swallowing disorders</p> |              |

|   |                |
|---|----------------|
| <b>SECTION B</b>  |                |
| <b>Unit 1</b>   |                |
| <p>1.1 Preliminaries – The anatomical position, body planes, general anatomical terms, directions and locations, common anatomical terms</p> <p>1.2 Overview of the embryology of the speech mechanism</p> <p>1.3 Respiratory system – anatomy of the lower airway (trachea, lungs), physiology of breathing, volumes, and capacities</p> <p>1.4 Phonatory system – anatomy of the larynx, vocal folds, physiology of larynx, voice production.</p> <p>1.5 Resonatory and articulatory systems – anatomy of the pharynx, oral cavity and nasal cavity, physiology of resonatory and articulatory system – resonance and articulation.</p> | <b>8 hours</b> |
| <p><b>Anatomy and Physiology of Central Nervous System-</b></p> <p>3.1 Anatomy: parts of the brain (CNS, PNS), hemispheres, lobes.</p> <p>3.2 Physiology: CNS and PNS, functions of different parts of the brain</p> <p>3.3 Cranial Nerves, cranial nerves important for speech &amp; hearing functions</p> <p>3.4 Overview of blood supply for brain and spinal cord</p>   | <b>8 hours</b> |

Books recommended.

## **SECTION A**

### **Common**

1. Fogle, P.T. (2013). Essentials of communication sciences & disorders, Delmar, Cengagelearning.
2. Anderson, N.B., & Shames, G.H. (2011). Human communication disorders, Pearson Education Inc, New Jersey.
3. Justice, L.M., & Redle, E, E. (2014). Communication sciences and disorders- A clinical

evidence-based approach, Pearson education, Inc, USA.

4. Roeser, R. J., Pearson, D.W., & Tobey, E.E. (1998). Speech-Language Pathology, Desk reference, Theme, New York.
5. Gunter, C.D., & Koenig, M.A. (2011). Communication development and disorders for partners in service, Plural Publishing, San Diego.
6. Bordon, G J., Harris, K S., & Raphael, L J. (2006). Speech science primer: Physiology, acoustics, & perception of speech. Lippincott-Williams & Wilkins.
7. Speaks, C. E. (1999). Introduction To Sound: Acoustics for the Hearing and Speech Sciences (3 edition). San Diego: Cengage Learning.

### **Unit 1**

8. Anderson, N.B., & Shames, G.H. (2011). Human communication disorders.Pearson Education, Inc, New Jersey.
9. Fogle, P.T. (2013). Essentials of communication sciences & disorders, Delmar, Cengage learning.
10. Justice, L.M., &Redle, E, E. (2014). Communication sciences and disorders- A clinical evidence-based approach, Pearson education, Inc, USA.
11. Roeser, R. J., Pearson, D,W., & Tobey, E.E. (1998). Speech-Language pathology desk reference, Theme, New York.
12. Gunter, C.D., & Koenig, M.A. (2011). Communication development and disorders for partners in service, Plural Publishing, San Diego.
13. Roseberry-McKibbin., & Hegde, M. N. (2011). An advanced review of Speech-Language pathology, 3<sup>rd</sup>edition, Pro-ed, Inc, Texas.
14. Rathna, N. (1993). Speech and Hearing in last 30 years. A publication of ISHA.
15. Status of disability in India. (2012). A publication by RCI, Crossway communication Pvt Ltd, New Delhi.
16. Manual for the training of PHC medical officers (2003). A publication by RCI, Grand print & process, New Delhi.
17. Anderson,N.B., & Shames, G.H. (2011). Human communication disorders.Pearson Education, Inc, New Jersey.
18. Gunter, C.D., & Koenig, M.A. (2011). Communication development and disorders for partners in service, Plural Publishing, San Diego
19. Angell, C.A. (2010). Language development and disorders: A case study approach, Jones & Bartlett Publishers, LLC.

### **Unit2**

20. Anderson, N.B., & Shames, G.H. (2011). Human communication disorders.Pearson Education, Inc,

New Jersey.

21. Roseberry-McKibbin., & Hegde, M. N. (2011). An advanced review of Speech-Language pathology, 3<sup>rd</sup> edition, Pro-ed, Inc, Texas.
22. Justice, L.M., & Redle, E, E. (2014). Communication sciences and disorders- A clinical evidence-based approach, Pearson education, Inc, USA.
23. Roeser, R. J., Pearson, D.W., & Tobey, E.E. (1998). Speech-Language pathology desk reference, Theme, New York.
24. Fogle, P.T. (2013). Essentials of communication sciences & disorders, Delmar, Cengage learning.
25. Justice, L.M., & Redle, E, E. (2014). Communication sciences and disorders- A clinical evidence-based approach, Pearson education, Inc, USA.

### **Unit3**

26. Fogle, P.T. (2013). Essentials of communication sciences & disorders, Delmar, Cengage learning.
27. Justice, L.M., & Redle, E, E. (2014). Communication sciences and disorders- A clinical evidence-based approach, Pearson education, Inc, USA.
28. Roseberry-McKibbin., & Hegde, M. N. (2011). An advanced review of Speech-Language pathology, 3<sup>rd</sup> edition, Pro-ed, Inc, Texas.
29. Roeser, R. J., Pearson, D.W., & Tobey, E.E. (1998). Speech-Language pathology desk reference, Theme, New York.
30. Fogle, P.T. (2013). Essentials of communication sciences & disorders, Delmar, Cengage learning.
31. Justice, L.M., & Redle, E, E. (2014). Communication sciences and disorders- A clinical evidence-based approach, Pearson education, Inc, USA.

### **Unit4**

32. Shulman, G.H. et al. (1998). Human communication disorders – An introduction. 3<sup>rd</sup> Edn. Allyn & Bacon, Boston.
33. Hegde, M.N. (1994). A coursebook on aphasia and other neurogenic language disorders. Singular publishing group, San Diego.
34. Angell, C.A. (2010). Language development and disorders: A case study approach, Jones & Bartlett Publishers, LLC.
35. Roseberry-McKibbin., & Hegde, M. N. (2011). An advanced review of Speech-Language pathology, 3<sup>rd</sup> edition, Pro-ed, Inc, Texas.
36. Angell, C.A. (2010). Language development and disorders: A case study approach,



## **SECTION B**

### **Unit1**

1. Fuller, D. R., Pimentel, J. T., &Peregoy, B. M. (2012). Applied Anatomy and Physiology for Speech-Language Pathology & Audiology. Lippincott Williams & Wilkins, Baltimore,MD
2. Jones, S. M., & Jones, T. A. (2011). Genetics, Embryology, and Development of Auditory and Vestibular Systems. Plural Publishing, San Diego.
3. Seikel, J., King, D., & Drumright, D. (2015). Anatomy & Physiology for Speech, Language, and Hearing, V Edition. Cengage Learning
4. Zemlin, W. R. (1998). Speech and Hearing Science: Anatomy and Physiology. Allyn & Bacon, Needham Heights, Massachusetts
5. Fuller, D. R., Pimentel, J. T., &Peregoy, B. M. (2012). Applied Anatomy and Physiology for Speech-Language Pathology & Audiology. Lippincott Williams & Wilkins, Baltimore, MD
6. Musiek, F. E., & Baran, J. A. (2007). The Auditory System: Anatomy, Physiology and Clinical Correlates. Pearson Education, Inc.
7. Plack, C. J. (2014). The sense of Hearing, II Edition. Psychology Press, New York

### **Unit2**

8. Culbertson, W. R., Cotton, S. S., & Tanner, D. C. (2006). Anatomy and Physiology Study Guide for Speech and Hearing. Plural Publishing, San Diego.
9. Rouse, M. H. (2016). Neuroanatomy for Speech-Language Pathology and Audiology. Jones & Bartlett Learning, LLC
10. Seikel, J., King, D., & Drumright, D. (2015). Anatomy & Physiology for Speech, Language, and Hearing, V Edition. Cengage Learning
11. Zemlin, W. R. (1998). Speech and Hearing Science: Anatomy and Physiology.
12. Allyn & Bacon, Needham Heights, Massachusett

### Course No.-2 (Theory)

| Course No. | Type of Course | Theory / Practical | Credits | Instruction hour per week | Total No. of Lectures/Hours / Semester | Duration of Exam | Formative Assessment Marks | Summative Assessment Marks | Total Marks |
|------------|----------------|--------------------|---------|---------------------------|--|------------------|----------------------------|----------------------------|-------------|
| Course-02  | DSCT           | Theory             | 03      | 03                        | 42hrs                                  | 2hrs             | 40                         | 60                         | 100         |

### BASLPDSCT-1.2 - Communication Sciences: Audiology

#### Course Outcome (CO):

After completion of course (Theory), students will be able to:

**CO1:** Gain knowledge about case history taking

**CO2:** Basic concepts of hearing sensitivity and acoustics

**CO3:** Historical aspects of audiology

**CO4:** Gain Knowledge about early hearing tests

**CO5:** Gain knowledge about properties of sounds

**CO6:** Concept of dB and Threshold Measurements

**CO7:** Basic Concepts Related to Incidence and Causative Factors

**CO8:** Basic concepts and terminologies related to hearing mechanism

**CO9:** Gain knowledge about branches of audiology

| <p style="text-align: center;"><b>Syllabus- Course 2(Theory)</b><br/><b>BASLPDSCT-1.2 - Communication Sciences: Audiology</b></p>   | <p style="text-align: center;"><b>Total Hrs: 42</b></p> |
|---|---|
| <p><b>Unit-I</b></p>  | <p style="text-align: center;"><b>10 hrs</b></p>        |
| <p><b>Historical Aspects and Case History-12 Hrs</b></p> <p>1.1 Historical aspects</p> <ul style="list-style-type: none"> <li>• History of audiology</li> <li>• Medical and non-medical fields associated with audiology</li> <li>• Development of Audiology in India</li> <li>• Branches of Audiology</li> <li>• Scope of audiology</li> </ul> <p>1.2 Case history</p> <ul style="list-style-type: none"> <li>• Need for the case history</li> <li>• Essential factors to be included in the case history form</li> <li>• Comparison of adults vs. children case history</li> <li>• The usefulness of the case history</li> </ul> <p>1.3 Early hearing tests</p> <ul style="list-style-type: none"> <li>• Nature and properties of tuning fork</li> <li>• Tuning fork tests: Qualitative tests – Rinne, Weber, and Bing</li> <li>• Quantitative test: Schwabach</li> <li>• Interpretation, advantages, and disadvantages</li> <li>• The audiometric version of Weber and Bing test.</li> <li>• Tuning fork tests findings in different degrees and types of hearing loss.</li> </ul> |   |
| <p><b>Unit-II</b></p>   | <p style="text-align: center;"><b>10hrs</b></p>         |
| <p><b>Concept of dB and Threshold Measurements</b></p> <p>2.1 dB concept</p> <ul style="list-style-type: none"> <li>• Different aspects of the dB</li> <li>• Power and pressure formulae, zero dB reference for pressure and power</li> <li>• Calculation of dB values from absolute values and vice-versa</li> <li>• Calculation of overall dB when two signals are superimposed, hearing level, sensation level</li> <li>• Application of dB</li> </ul> <p>2.2 Threshold concept</p> <ul style="list-style-type: none"> <li>• Threshold of audibility</li> <li>• MAP and MAF</li> <li>• Threshold of pain</li> <li>• Application of MAP and MAF</li> </ul>  |   |
| <p><b>Unit-III</b></p>  | <p style="text-align: center;"><b>10 hrs</b></p>        |
| <p><b>Properties of Sound-12Hrs</b></p> <p>3.1 Frequency: Concept – frequency, octave frequency, Psychophysical correlates, Factors affecting pitch</p> <p>3.2 Intensity: Concept, Psychophysical correlates: Phons and sones – relation between phons and sones, use of phon and sone graph, computation of relative loudness of two given sounds using these graphs.</p> <p>3.3 Duration: Basic concept</p> <p>3.4 Differential sensitivity for intensity, frequency, and duration.</p>   |   |

| Unit-IV   | 12hrs |
|---|-------|
| <p><b>Anatomy and Physiology of Auditory System</b></p> <p>2.1 Overview of the embryology of the auditory mechanism</p> <p>2.2 External ear – anatomy and physiology of the pinna, external auditory canal</p> <p>2.3 Middle ear – anatomy of the tympanic membrane, ossicular chain, Eustachian tube, walls of the tympanic cavity, muscles, ligaments, and tendons. Physiology – transformer action of the middle ear. The function of the middle ear muscles and Eustachian tube.</p> <p>2.4 Inner ear – Anatomy – parts of the inner ear – bony labyrinth and membranous labyrinth, cochlea, semicircular canals, utricles, saccule. Physiology of the cochlea, cochlear microphonics, summating potential theories of hearing in brief, modes of bone conduction, physiology of the SSC, utricles, and saccule.</p> <p>2.5 Auditory pathway and central hearing mechanism: Anatomy of the afferent and efferent auditory pathway, action potential.</p> <p><b>Introduction to Hearing Disorders: Classification and Characteristics-</b></p> <p>4.1 Different types of hearing loss, general characteristics of conductive, mixed, and sensorineural hearing loss</p> <p>4.2 Classification of causes of hearing loss. Causes of hearing impairment: hereditary hearing loss, congenital hearing loss, acquired hearing loss in children and adults, causes of central auditory disorders.</p> |       |

Books recommended. Common

1. Martin, F. N., & Clark, J. G. (2014). Introduction to Audiology (12edition). Boston: Pearson.
2. Gelfand, S. A. (2009). Hearing: An Introduction to Psychological and Physiological Acoustics (5 edition). London: CRC Press.
3. Zwicker E. Fastl H. "Psychoacoustics – Facts & Models" Springer – 1999
4. Palmer A.R. Rees A, Summerfield AQ Meddis K. Psychophysical andphysiological advances in hearing – Whurr Publication 1998
5. HanghtonPiter "Acoustics for Audiologists" Academic Press 2002
6. Warren R.M 1999. Auditory Perception-A new Analysis and synthesis U Rosenthal DF &Okiano H G "Computational Auditory Scene Analysis"LawrenceErlbaun Associates, Publishers 1998.
7. Yost "Directional Hearing" – Wiley 2000
8. Culbertson, W. R., Cotton, S. S., & Tanner, D. C. (2006). Anatomy and Physiology Study Guide for Speech and Hearing. Plural Publishing, San Diego.
9. Fuller, D. R., Pimentel, J. T., &Peregoy, B. M. (2012). Applied Anatomy and Physiology for Speech-Language Pathology & Audiology. Lippincott Williams & Wilkins, Baltimore, MD
10. Seikel, J., King, D., & Drumright, D. (2015). Anatomy & Physiology for Speech, Language, and Hearing, V Edition, Cengage Learning
11. Zemlin, W. R. (1998). Speech and Hearing Science: Anatomy and Physiology.
12. Allyn & Bacon, Needham Heights, Massachusetts

**Course No-3**  
**Theory**  
**Title of Paper: Linguistics &Phonetics**

| Type of Course | Theory / Practical | Credits | Instruction hour per week | Total No. of Lectures/Hours / Semester | Duration of Exam | Formative Assessment Marks | Summative Assessment Marks | Total Marks |
|----------------|--------------------|---------|---------------------------|--|------------------|----------------------------|----------------------------|-------------|
| DSCT-1.3       | Theory             | 03      | 03hrs                     | 42                                     | 2hr              | 40                         | 60                         | 100         |

**Course Outcome (CO):**

After completion of course, students will be able to know:

- CO 1** : Language and Linguistics
- CO 2** : Morphology, Syntax, Semantics, and Pragmatics
- CO 3** Phonetics and Phonology
- CO 4** Language acquisition and Language Learning

| <b>Syllabus- DSCT 1.3: Title- Linguistics &amp;Phonetics</b>   | <b>Total Hrs: 42</b> |
|--|----------------------|
| <b>Unit-I</b>  | <b>10 hrs</b>        |
| <p><b>Language and Linguistics-</b></p> <p>1.1 Introduction to Language- Definition, Characteristics of language, Functions of language, Difference between animal communication systems and human language.</p> <p>1.2 An introduction to the language families of India and language families of the world.</p> <p>1.3 Writing systems– History of writing systems, Types of writing systems, Indian writing systems</p> <p>1.4 Introduction to Linguistics – Definition, brief introduction to different branches of linguistics such as Sociolinguistics, Psycholinguistics, Neurolinguistics, and Clinical linguistics. Application of linguistics with special reference to communication disorders.</p> <p>Transcription systems with special emphasis on International Phonetic Alphabet (IPA);<br/>Basic Transcription practices.</p> |                      |
| <b>Unit-II</b>   | <b>10 hrs</b>        |
| <p><b>Morphology, Syntax, Semantics, and Pragmatics</b></p> <p>2.1 Morphology – concepts of morph, allomorph, morpheme, bound and free forms, roots, etc. Types of morphemes - inflection and derivation. Concept of word, content and function words, form classes, Processes of word formation, endocentric and exocentric constructions, grammatical categories, paradigmatic and syntagmatic relationship.</p> <p>2.2 Syntax – Concept, Different methods of syntactic analysis – Immediate Constituent (IC) Analysis, Phrase Structure Grammar, Transformational Generative Grammar, Introduction to the major types of transformations. Types of Sentences, Notions of competence versus performance, deep structure versus surface structure, acceptability versus grammaticality, langue versus parole.</p>                            |                      |

|  |               |
|--|---------------|
| 2.3 A brief introduction to Semantics - homonyms, synonyms and antonyms, Semantic Feature Theory.<br>2.4 A brief introduction to Pragmatics – discourse; intent of communication   |               |
| <b>Unit-III</b>  | <b>10 hrs</b> |
| <b>Phonetics and Phonology</b><br>3.1 Introduction to Phonetics and its different branches – articulatory, acoustic, auditory, and experimental phonetics, air-stream mechanism, articulatory classification of sounds – segmentals and suprasegmentals, classification description, and recognition of vowels and consonants.<br>3.2 Introduction to Phonology, classification of speech sounds based on distinctive features; phonotactics; Principles and practices of phonemic analysis; common phonological processes like- assimilation, dissimilation, metathesis, haplology, epenthesis, spoonerism, vowel harmony, nasalization, neutralization                                 |               |
| <b>Unit-IV</b>   | <b>12 hrs</b> |
| <b>Language acquisition and Language Learning</b><br>4.1 Issues in first language acquisition; Stages of language development – pre-linguistic stage and linguistic stage, acquisition of phonology, acquisition of morphology, acquisition of syntax, acquisition of semantics, acquisition of pragmatics, language, and cognition.<br>4.2 Issues in second language acquisition; differences between first language acquisition and second language acquisition/learning. Bilingualism in children-compound, coordinate, simultaneous, successive<br>4.3 Inter-language theory, Language transfer & Linguistic interference; Factors influencing second language acquisition/learning. |               |

Books recommended.

#### Common

1. Akmajian, Adrian; Demers, Richard; Farmer, Ann; Harnish, Robert (2010). Linguistics: An Introduction to Language and Communication. Cambridge, MA: The MIT Press.
2. Finch, Geoffrey. (2003). How to Study Linguistics. N.Y: Palgrave Macmillan.
3. O'Grady, William et al. (2005). Contemporary Linguistics: An Introduction (5th ed.). Bedford/St. Martin's.
4. Radford, A., Atkinson, R. M., Britain, D., Clahsen, H., Spencer, A. J.(1999). Linguistics: An Introduction, Cambridge University Press.
5. Yule, G. (2006): The study of language (Third edition). Cambridge: Cambridge
6. Clark and Yallop (1999). An introduction to phonetics and phonology.Oxford:Blackwell Publishers Inc.
7. Karanth, P (2003). A cross-Linguistic study of Acquired Reading Disorders. Sage Publications, New Delhi. ISBN: 0-306-48319-X

#### Unit 1

8. Abbi, Anvita. (2001). A Manual of Linguistic Field Work and Structures of Indian Languages. München: LINCOMEuropa.
9. Akmajian, Adrian; Demers, Richard; Farmer, Ann; Harnish, Robert (2010). Linguistics: An Introduction to Language and Communication. Cambridge, MA: The MIT Press.

10. Bhatia, Tej K., and William C. Ritchie (eds.) (2006). *Bilingualism in South Asia*. In: *Handbook of Bilingualism*. Oxford: Blackwell Publishing.
11. Yule, G. (2006): *The study of language* (Third edition). Cambridge: Cambridge University Press.
12. Bloomfield, Leonard. (1933). *Language*. New York: H. Holt and Company.
13. Buch, A., Erschler, D., Jäger, G., Lupas, A. (2013). *Towards automated language classification: a clustering approach*. *Approaches to Measuring Linguistic Differences*. Walter de Gruyter.
14. Finch, Geoffrey. (2003). *How to Study Linguistics*. N.Y: Palgrave Macmillan.

## Unit 2

15. Akmajian, Adrian; Demers, Richard; Farmer, Ann; Harnish, Robert(2010). *Linguistics: An Introduction to Language and Communication*. Cambridge, MA: The MIT Press.
16. Cruse, Alan (2004). *Meaning and Language: An Introduction to Semantics and Pragmatics*. Oxford University Press.
17. Radford, A., Atkinson, R. M., Britain, D., Clahsen, H., Spencer, A. J.(1999). *Linguistics: An Introduction*, Cambridge University Press.

## Unit 3

18. Carr, Philip (2003). *English Phonetics and Phonology: An Introduction*. Massachusetts, Blackwell Publishing.
19. Catford, J.C. (2001). *A Practical Introduction to Phonetics*. Oxford University Press.
20. Clark and Yallop (1999). *An introduction to phonetics and phonology*. Oxford: Blackwell Publishers Inc.
21. International Phonetic Association (1999). *Handbook of the International Phonetic Association*. Cambridge University Press.
22. Lass, Roger (1998. Digitized 2000). "Phonology: An Introduction to Basic Concepts". Cambridge University Press, UK.

## Unit 4

23. Kennison, S. (2013). *Introduction to language development*. Los Angeles, CA: Sage.
24. Nelson N. W (1998). *Childhood language disorders in context – infancy through adolescence*. Allyn and Bacon, Boston.
25. Pinker, Steven (2007). *The Language Instinct: How the Mind Creates Language* (P.S.). Harper Perennial Modern Classics.
26. Allwright, Dick; Hanks, Judith (2009). *The Developing Language Learning: An Introduction to Exploratory Practice*. Basingstoke: Palgrave MacMillan.
27. Berk, Laura E. (2009). *Language Development*. *Child development*. Boston: Pearson Education/Allyn & Bacon.
28. Cook, V. and Singleton, D. (2014). *Key Topics in Second Language Acquisition*. Bristol: Multilingual Matters.
29. Foster-Cohen, S. (2009): *Language acquisition*. London: Palgrave Macmillan. Sousa, David A. (2011). *How the brain learns*. Thousand Oaks, Calif.: Corwin Press.
30. Tomasello, Michael (2003). *Constructing a language: a usage-based theory of language acquisition*. Cambridge: Harvard University Press

## B.Sc. Semester –I

**Subject:** Electronics and Acoustics  
**Open Elective Course (OEC-1)**  
**(OEC for other students)**

| Course No. | Type of Course | Theory / Practical | Credits | Instruction hour per week | Total No. of Lectures/Hours / Semester | Duration of Exam | Formative Assessment Marks | Summative Assessment Marks | Total Marks |
|------------|----------------|--------------------|---------|---------------------------|--|------------------|----------------------------|----------------------------|-------------|
| OEC-1      | OEC            | Theory             | 03      | 03                        | 42 hrs                                 | 2 hrs            | 40                         | 60                         | 100         |

OEC-1: Title of the Course: Electronics and Acoustics

### Course Outcome (CO):

After completion of course, students will be able to:

**CO 1 : Introduction to Electronics & Signal Processing**

**CO 2 : Fundamentals of Acoustics-**

**CO 3 : Introduction to Information Technology**

**CO 4 : Instrumentation in Speech, Language and Hearing**

**CO 5 : Gain knowledge about** sound characteristics such as frequency, wavelength, amplitude

| Syllabus- OEC: Title- Electronics and Acoustics   | Total Hrs: 42 |
|---|---------------|
| <b>Unit-I</b>   | <b>10 hrs</b> |
| <b>Introduction to Electronics &amp; Signal Processing-</b><br><br>1.1 Basic principle of operation and working of <ul style="list-style-type: none"><li>Resistors, variable resistor, capacitor inductor, semiconductor, and diodes</li><li>LEDs, seven-segment displays, LCDs</li><li>Introduction to signal processing</li><li>Amplification concept of gain and bandwidth</li><li>Frequency response</li></ul> 1.2 Power supply <ul style="list-style-type: none"><li>Block diagram of DC power supply, description, and working of each block</li><li>AC power supply &amp; voltage stabilization and servo-controlled method of stabilization</li><li>UPS and Inverters</li><li>Isolation transformer, AC power supply grounding</li></ul> 1.3 Fundamental of digital signal processing <ul style="list-style-type: none"><li>Binary number system, logic gates, flip flops, and counters</li><li>Analog signal &amp; digital signal –Representation and comparison</li></ul> |               |



|  |                 |
|--|-----------------|
| <ul style="list-style-type: none"> <li>• Converting analog signal to digital signal</li> <li>• The basic structure of a digital processing system</li> <li>• Converting digital signal to analog signal</li> </ul> <p>1.4 Application of DSP</p> <ul style="list-style-type: none"> <li>• Analog signal processing Vs digital signal processing – Comparison, merits, and demerits</li> <li>• Applications of DSP in communication sciences and disorder.</li> </ul>   |                 |
| <b>Unit-II</b>   | <b>10 hrs</b>   |
| <p><b>Fundamentals of Acoustics-</b></p> <p>2.1 Physics of Sound</p> <ul style="list-style-type: none"> <li>• Nature and Propagation of sound</li> <li>• Sound characteristics such as frequency, wavelength, amplitude</li> <li>• Pitch and Loudness- Sone, Phon, equal-loudness contour</li> <li>• Sound pressure level and sound power level</li> </ul> <p>2.2 Quality and properties of sound</p> <ul style="list-style-type: none"> <li>• Time-domain and frequency domain representation</li> <li>• Acoustic Impedance</li> </ul> <p>2.3 Acoustic Environment in closed rooms</p> <ul style="list-style-type: none"> <li>• Reflection and absorption, reverberation</li> <li>• Background noise, speech to noise ratio</li> <li>• Techniques to reduce reverberation</li> <li>• Acoustically treated rooms – Basic requirements, concept, and structure.</li> </ul> <p>2.4 Transducers, Sound Measurement, reproduction, and recording</p> <ul style="list-style-type: none"> <li>• Microphones-Piezoelectric, moving coil, condenser, electrets, etc</li> <li>• Loudspeaker and their enclosures</li> <li>• Digital recording &amp; audiometric transducers reproduction</li> <li>• Sound level meters &amp; acoustic measurements</li> </ul> |                 |
| <b>Unit-III</b>  | <b>10 hrs</b>   |
| <p><b>Introduction to Information Technology-</b></p> <p>3.1 Introduction to computers</p> <ul style="list-style-type: none"> <li>• SMPS, Hardware, Memory devices, and types of storage media</li> <li>• Specification of personal computers</li> </ul> <p>3.2 Software</p> <ul style="list-style-type: none"> <li>• Operating systems-Types, comparison, and functioning</li> <li>• Application software used in Communication Sciences and disorder</li> <li>• Mobile Apps-concept &amp; functioning</li> </ul> <p>3.3 Structure and functioning of internet and intranet</p> <ul style="list-style-type: none"> <li>• Concept of internet and world wide web</li> <li>• Local Area Network – structure and components</li> </ul> <p>3.4 Basic concept of Tele diagnosis &amp; Tele-rehabilitation</p>  |                 |
| <b>Unit-IV</b>   | <b>12 hours</b> |
| <p><b>Instrumentation in Speech, Language and Hearing-</b></p> <p>4.1 Introduction to electronic instrumentation</p>   |                 |

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Pre-amplifiers and Poweramplifiers</li> <li>• Filters-different types and their frequency response</li> </ul> <p>4.2 Principle of operation, a block diagram of</p> <ul style="list-style-type: none"> <li>• The basic technology of analog and digital hearing aids</li> <li>• Audiometers</li> <li>• Immittance meters</li> <li>• Group amplification and Assistive Listening Devices</li> <li>• Speech spectrograph</li> </ul> <p>4.3 Calibration of audiometers – Equipment, setup, and procedure.</p> |  |
|---|--|

## Books recommended

### Common

1. Haughton, P., & Haughton, P. M. (2002). *Acoustics for Audiologists* (1st edition.).San Diego, Calif: Emerald Group Publishing Limited.
2. Moser, P. (2015). *Electronics and Instrumentation for Audiologists*.Psychology Press.
3. Moser, P. J. (2013). *Electronics and Instrumentation for Audiologists*.Psychology Press.
4. Rout, N and Rajendran, S. (2014). *Hearing aid troubleshooting and Maintenance*, Published by National Institute for Empowerment of Persons with Multiple Disabilities, Chennai. Freely downloadable from <http://niepmd.tn.nic.in/publication.php>. ISBN 978-81-928032-1-0.
5. Speaks, C. E. (1999). *Introduction To Sound: Acoustics for the Hearing and Speech Sciences* (3 edition.). San Diego: Cengage Learning.
6. Villchur, E. (1999). *Acoustics for Audiologists* (1 edition.). San Diego, Calif: Delmar Cengage Learning.

### Unit1

7. Theraja, B. L. (2008). *Textbook of Electrical Technology*: Chand (S.) & Co Ltd,India.
8. Godse, A. P., &Bakshi, U. A. (2007). *Electronic Devices and Circuits I*: Technical Publications.
9. Mehta.V.K. & Mehta. R (2006): *Basic Engineering*: S. Chand & Co ltd Thompson, D. M. (2005). *Understanding Audio: Getting the Most Out ofYour Project or Professional Recording Studio.*: Berklee Press.
10. Cavanaugh, W. J., Tocci, G. C., & Wilkes, J. A. (2009). *Architectural Acoustics: Principles and Practice*: Wiley.
11. Kleiner, M. (2011). *Acoustics and Audio Technology*, Third Edition (Acoustics: *Information and Communication*): J. Ross Publishing.
12. Fahy, F. J. (2000). *Foundations of Engineering Acoustics*: academic press.
13. Rossing, T. D., Moore, F.R. & Wheeler.P.A (2001): *The Science of Sound*(3<sup>rd</sup>ed): Addison-Wesley.

### Unit2

14. Rajesh, R. S. (2002). *Computer Networks: Fundamentals and Applications*: SangamBooksLtd.
15. Robertazzi, T. (2011). *Basics of Computer Networking* (Springer Briefs in Electrical and Computer Engineering): Springer.

### Unit3

16. Beranek, L. L., & Mellow, T. (2012). *Acoustics: Sound Fields and Transducers*: Academic Press.

17. Katz.J. (2014): *Handbook of Clinical Audiology* (7<sup>th</sup>.ed): North American Sandlin.R.E (2000). *Textbook of Hearing aid amplification: Technical and clinical consideration:* Cengage learning.

#### **Unit4**

18. Godse, M. A. P., & Bakshi, M. U. A. (2008). *Linear & Digital IC Application:* Technical Publications.
19. Malvino. A., & Bates. D. (2015): *Electronics principle* (8<sup>th</sup>ed): Mc Graw-Hill education. Course 1.6 (SEC)

**Name of Course (Subject): English (AECC)**  
**B.Sc., BCA., B.Sc.(Pulp & Paper Science) B.A.S.L.P (Hon)**  
**Semester – I**

**Subject: Generic English-1**  
**Ability Enhancement Compulsory Course (AECC)**  
**AECC-1**

| Course No. | Type of Course | Theory / Practical | Credits | Instruction hour per week | Total No. of Lectures/Hours / Semester | Duration of Exam | Formative Assessment Marks | Summative Assessment Marks | Total Marks |
|------------|----------------|--------------------|---------|---------------------------|--|------------------|----------------------------|----------------------------|-------------|
| Course-01  | AECC           | Theory             | 03      | 04                        | 42 hrs                                 | 2hrs             | 40                         | 60                         | 100         |

Title of the AECC: **Generic English-1**

**Course Outcome (CO):**

After completion of course -1, students will be able to:

1. This paper aims at introducing English poetry and prose to develop reading skills
2. It teaching them the basics of English grammar.
3. Aims to develop communicative grammar skills
4. Learn to understand basics of writing

| <b>Syllabus- AECC 1: Title-<br/>Shalmala</b> |   | <b>Total Hrs:<br/>42</b> |
|--|---|--------------------------|
| <b>Unit –1</b>                               | <b>Prose</b>  | <b>14 hrs</b>            |
| <b>Chapter No. 1</b>                         | Playing the English Gentleman - Mahatma Gandhi  |                          |
| <b>Chapter No. 2.</b>                        | Let’s Go Home - Kewlin Sio  |                          |
| <b>Chapter No.3.</b>                         | Marriage is a Private Affair - Chinua Achebe  |                          |
| <b>Unit – 2 Poetry</b>                       |   | <b>14 hrs</b>            |
| <b>Chapter No.4.</b>                         | River - A. K. Ramanujan   |                          |
| <b>Chapter No.5.</b>                         | The Road not Taken - Robert Frost   |                          |
| <b>Chapter No. 6.</b>                        | If - Rudyard Kipling  |                          |
| <b>Unit – 3: Grammar and Vocabulary</b>      |   | <b>14 hrs</b>            |
| <b>Chapter No -7.</b>                        | Parts of Speech with special emphasis on Articles and Prepositions ( <b>Focus may be on the following prepositions:</b> On, in, of, off, for, into, with, beside, besides, under, over, by, from, to, at, across, since, between, among, above, up, after, before, through) |                          |
| <b>Chapter No -8.</b>                        | Tenses (with focus on the use of simple present tense and simple past tense)  |                          |
| <b>Chapter No -9.</b>                        | Words used in different parts of speech   |                          |
| <b>Chapter No -10.</b>                       | Functional vocabulary   |                          |

1. **Text Books: Timeless Wisdom**, Board of Editors, Orient Blackswan, Hyderabad Hyderabad
2. **Suggested Reading: R. P. Singh’s Functional Skills in Language and Literature**, OUP



**Name of Course (Subject) : Kannada**

**Semester – I**

**Subject: Kannada for Non-Kannadigas (not studied Kannada at any stage up to PUC/10+2 level)  
Ability Enhancement Compulsory Course (AECC)**

**AECC-1**

| Course No.       | Type of Course          | Theory / Practical | Credits | Instruction hour per week | Total No. of Lectures/Hours / Semester | Duration of Exam | Formative Assessment Marks | Summative Assessment Marks | Total Marks |
|------------------|-------------------------|--------------------|---------|---------------------------|--|------------------|----------------------------|----------------------------|-------------|
| <b>Course-01</b> | AECC for Non-Kannadigas | Theory             | 03      | 03                        | 42 hrs                                 | 2hrs             | 40                         | 60                         | 100         |

Title of the AECC: **ಪ್ರತಿಭಾ ಹೆಚ್ಚಿಸುವ ಕನ್ನಡ ಅಭಿವೃದ್ಧಿ ಕೋರ್ಸ್**

**Course Outcome (CO):**

After completion of course -1, students will be able to:

- CO 1** : Introducing spoken variety of Kannada
- CO 2** : Introducing different parts of speech of Kannada
- CO 3** : Exposing different language contexts of Kannada.
- CO 4** : Introducing simple verb forms of Kannada.
- CO 5** : The Course enhances the speaking ability of the learner.

| <b>Syllabus- AECC 1: Title- ಪ್ರತಿಭಾ ಹೆಚ್ಚಿಸುವ ಕನ್ನಡ ಅಭಿವೃದ್ಧಿ ಕೋರ್ಸ್</b>  | <b>Total Hrs: 42</b> |
|---|----------------------|
| <b>Unit-I</b>   | <b>14 hrs</b>        |
| <b>Introducing each other</b><br>Personal Pronouns, Possible forms, Interrogative words.<br><b>Introducing each other 7</b><br>po personal pronouns, Possessive forms, Yes/No Type interrogative<br><b>About Ramayana</b><br>Possessive forms of nouns, dubietie question, Relative nouns     |                      |
| <b>Unit-II</b>  | <b>14 hrs</b>        |
| <b>Enquiring about college.</b><br>Qualitative and quantitative adjectives.<br><b>Enquiring about room</b><br>Predicative forms, locative case.<br><b>Vegetable Market.</b><br>Dative case, basic numerals  |                      |
| <b>Unit-III</b>   | <b>14 hrs</b>        |
| <b>About Medical college</b><br>Ordinal numerals, plural markers.<br><b>In a cloth shop.</b><br>Color adjectives, defective verbs<br><b>Plan to go for a picnic.</b><br>Imperative, permissive and hortative.<br><b>Enquiring about one's family</b><br>Verb iru, and corresponding negation. |                      |

Books recommended.

1- **ಪ್ರತಿಭಾ ಹೆಚ್ಚಿಸುವ ಕನ್ನಡ ಅಭಿವೃದ್ಧಿ ಕೋರ್ಸ್**



## B.Sc. Semester –I

### Subject: Clinical (Speech Language Pathology) Discipline Specific Course (SEC-SB 1.1)

| Course No. | Type of Course | Theory / Practical | Credits | Instruction hour per week | Total No. of Lectures/Hours / Semester | Duration of Exam | Formative Assessment Marks | Summative Assessment Marks | Total Marks |
|------------|----------------|--------------------|---------|---------------------------|--|------------------|----------------------------|----------------------------|-------------|
| Course-05  | SEC-SB-1.1     | Practical          | 02      | 3                         | 32 hrs                                 | -                | 25                         | 25                         | 50          |

Course No.1 (Practical): Title of the Course (Practical): **Clinical (Speech Language Pathology)**

#### Course Outcome (CO):

After completion of course (Practical), students will be able to:

**CO 1** : Gain knowledge about characteristics of normal speech

**CO 2** : Gain knowledge about characteristics of normal speech

**CO 3** : Gain knowledge about suprasegmentals aspects of speech

**CO 4** : Gain knowledge about structure and functioning of normal speech mechanism

**CO 5** : Gain knowledge about normal speech and language milestones

**CO 6** : Gain knowledge about basic speech and language test materials

#### List of the Experiments for 32 hrs / Semesters

1. Demonstrate normal aspects of speech and analyze perceptual variations in voice, articulation, and fluency in different recorded speech samples of typical individuals at different age groups (children, adults, and older adults) and sex.
2. Demonstrate normal aspects of language and analyze perceptual variations in the language in different recorded samples of typical individuals at different age groups (children, adults, and older adults) and sex.
3. Demonstrate stress, rhythm and intonation, and variations in the rate of speech and analyze perceptually variations in prosody in different recorded samples of typical individuals at different age groups (children, adults, and older adults) and sex.
4. Record a standard passage, count the number of syllables and words, identify syllable structure, syntactic structures in the passage.
5. Oral mechanism examination on 5 normal children and 5 normal adults.
6. Prepare a chart and show the developmental stages of speech and language behavior.
7. Administer standardized tests for assessment of delayed speech and language development



such as REEL, SECS, LAT, 3DLAT, ALD each on any 2 children.

8. Study the available normative data (Indian/Western) of speech such as respiratory, phonatory, resonatory, and articulatory parameters.
9. Measure the following in 5 normal subjects:
  - (a) Habitual frequency
  - (b) Frequency range
  - (c) Intensity
  - (d) Intensity range
  - (e) Phonation duration
  - (f) Rate of speech
  - (g) Alternate Motion Rates and Sequential Motion Rates
  - (h) s/z ratio.

**Scheme of Practical Examination (distribution of marks): 25 marks for Semester end examination**

**1. Practicum – 10 Marks**

**2. Viva- 15 Marks**

**Total 25 marks**

**Note: Same Scheme may be used for IA (Formative Assessment) examination**

**Books recommended**

1. Fogle, P.T. (2013). Essentials of communication sciences & disorders, Delmar, Cengagelearning.
2. Anderson, N.B., & Shames, G.H. (2011). Human communication disorders, Pearson Education Inc, New Jersey.
3. Justice, L.M., & Redle, E, E. (2014). Communication sciences and disorders- A clinical evidence-based approach, Pearson education, Inc, USA.
4. Roeser, R. J., Pearson, D,W., & Tobey, E.E. (1998). Speech-Language Pathology, Desk reference, Theme, New York.

## B.Sc. Semester –I

### Subject: Clinical (Audiology) Discipline Specific Course (DSCP 1.4)

| Course No. | Type of Course | Theory / Practical | Credits | Instruction hour per week | Total No. of Lectures/Hours / Semester | Duration of Exam | Formative Assessment Marks | Summative Assessment Marks | Total Marks |
|------------|----------------|--------------------|---------|---------------------------|--|------------------|----------------------------|----------------------------|-------------|
| Course-06  | DSCP           | Practical          | 02      | 4                         | 52 hrs                                 | -                | 25                         | 25                         | 50          |

Course No.1 (Practical): Title of the Course (Practical): **Clinical (Speech Language Pathology)**

#### Course Outcome (CO):

After completion of course (Practical), students will be able to:

- CO 1** : Gain knowledge about characteristics of normal hearing mechanism
- CO 2** : Gain knowledge about basic audiometric tests
- CO 3** : Gain knowledge about case history taking
- CO 4** : Gain knowledge about tuning fork tests

#### List of the Experiments for 52 hrs / Semesters

1. Measure most comfortable level on 10 participants with normal hearing sensitivity.
2. Measure uncomfortable levels on 10 participants with normal hearing sensitivity.
3. Calculate the sensation levels of MCL and UCLs in the above 10 participants.
4. Measure difference limen of intensity, frequency, and duration on 10 normal-hearing adults and plot it in graphical form and interpret the results.
5. Measure equal loudness level contours at a minimum level, 40 dB SPL, 70 dB SPL (1 kHz) in 5 normal-hearing adults.
6. Take case history on 5 adults and 5 children with a hearing problem and correlate the information from case history to results of pure tone audiometry.
7. Administer different tuning fork tests on 5 simulated conductive and 5 sensorineural hearing loss individuals.

**Scheme of Practical Examination (distribution of marks): 25 marks for Semester end examination**

**1. Practicum – 10 Marks**

**2. Viva- 15 Marks**

**Total 25 marks**

**Note: Same Scheme may be used for IA (Formative Assessment) examination**

Books recommended.

1. Martin, F. N., & Clark, J. G. (2014). Introduction to Audiology (12edition). Boston: Pearson.
2. Gelfand, S. A. (2009). Hearing: An Introduction to Psychological and Physiological Acoustics (5 edition). London: CRC Press.
3. Zwicker E. Fastl H. “Psychoacoustics – Facts & Models” Springer – 1999
4. Palmer A.R. Rees A, Summerfield AQ Meddis K. Psychophysical and physiological advances in hearing – Whurr Publication 1998
5. HanghtonPiter “Acoustics for Audiologists” Academic Press 2002
6. Warren R.M 1999. Auditory Perception-A new Analysis and synthesis U Rosenthal DF &Okiano H G “Computational Auditory Scene Analysis” Lawrence Erlbaun Associates, Publishers 1998.
7. Yost “Directional Hearing” – Wiley 2000

**Details of Formative assessment (IA)for DSCC theory/OEC: 40% weight age for total marks**

| Type of Assessment  | Weight age                                      | Duration | Commencement          |
|---|---|----------|-----------------------|
| Written test-1  | 15%   | 1 hr     | 8 <sup>th</sup> Week  |
| Written test-2  | 15%   | 1 hr     | 12 <sup>th</sup> Week |
| Case study / Assignment / Field work / Project work/ Activity | 10%   | -----    | --                    |
| Total   | 40% of the maximum marks allotted for the paper |          |                       |

**Faculty of Science**

**04 - Year UG Honors programme:2021-22**

**GENERAL PATTERN OF THEORYQUESTION PAPER FOR DSCC/ OEC**

**(60 marks for semester end Examination with 2 hrs duration)**

**Part-A**

1. Question number 1-06carries 2 marks each. Answer any05 questions :10marks

**Part-B**

2. Question number 07- 11 carries 05Marks each. Answer any 04questions : 20 marks

**Part-C**

3. Question number 12-15 carries 10 Marks each. Answer any 03 questions : 30 marks  
(Minimum 1 question from each unit and 10 marks question may have sub questions for 7+3 or 6+4 or 5+5 if necessary)

**Total: 60 Marks**

**Note: Proportionate weightage shall be given to each unit based on number of hours prescribed.**



# B.Sc. Semester –II

## Discipline Specific Course (DSC)

The course Bachelor in Audiology and Speech- Language Pathology in II semester has 4 papers (Theory Paper –2 for 8 credits & Practical-2 for 4 credits) for 12 credits: All the papers are compulsory. Details of the courses are as under.

### Subject: Speech-Language Pathology – Assessment and Management

| Course No. | Type of Course | Theory / Practical | Credits | Instruction hour per week | Total No. of Lectures/Hours / Semester | Duration of Exam | Formative Assessment Marks | Summative Assessment Marks | Total Marks |
|------------|----------------|--------------------|---------|---------------------------|--|------------------|----------------------------|----------------------------|-------------|
| Course-2.1 | DSCT           | Theory             | 04      | 04                        | 56 hrs                                 | 2hrs             | 40                         | 60                         | 100         |

Course No.2.1 (Theory): Title of the Course (Theory): Speech-Language Pathology – Assessment and Management

#### Course Outcome (CO):

After completion of course (Theory), students will be able to:

**CO 1 :Assessment procedure**

**CO 2 : Models**

**CO 3 : Treatment**

**CO 4 : Code of ethics**

**CO 5 : counseling**

| Syllabus- Course 2.1 (Theory): Title- Speech-Language Pathology – Assessment and Management  | Total Hrs: 40 |
|--|---------------|
| <b>Unit-I</b>  | <b>10hrs</b>  |
| <p><b>Overview of Procedures Involved in Speech-Language Diagnostics</b></p> <p>1.1 Case history – the need for the case history – essential factors to be included in the case history form – comparison of adults vs. children case history – the usefulness of the case history, Case history format for various communication disorders</p> <p>1.2 Basic terminologies and concepts</p> <p>1.3 Introduction to diagnostics, Classification of disorders: DSM, ICD, terminologies in the diagnostic process, general principles of diagnosis, diagnostic setup, and tools.</p> <p>1.4 Characteristics of a diagnostic clinician</p> <p>1.5 Diagnostic setup and tools</p> |               |
| <b>Unit-II</b>   | <b>10 hrs</b> |

|  |                      |
|--|----------------------|
| <p><b>Diagnostic Models and Approaches</b></p> <p>2.1 Diagnostic models and their application to communication disorders – SLPM, Wepman, Bloom, and Lahey</p> <p>2.2 Types of diagnoses: Concept, application and its relevance to communication disorder – Clinical diagnosis, direct diagnosis, differential diagnosis, diagnosis by treatment, diagnosis by exclusion, team diagnosis, instrumental diagnosis, provocative diagnosis, tentative diagnosis advantage/disadvantages</p>   |                      |
| <p><b>Unit-III</b></p>   | <p><b>10 hrs</b></p> |
| <p><b>Basic Concepts of Intervention and Procedures Involved in Speech-Language Therapy</b></p> <p>3.1 General principles of speech and language therapy</p> <p>3.2 Models in Therapeutics and its application to Speech-Language Therapy: Medical model, Behavioural model, and Learning Models</p> <p>3.3 Approaches to speech and language therapy – Formal, informal, and eclectic approaches; Behaviourist, Linguistic-Cognitive and Social interactionist approach</p> <p>3.4 Strategies for speech and language therapy-Individual Specific and Developmental strategies</p> <p>3.5 Speech therapy set-up</p> <p>3.6 Individual and group therapy</p> <p>3.7 Integrated and Inclusive Education</p> <p>3.8 Tele practice and Apps</p> |                      |
| <p><b>Unit-IV</b></p>  | <p><b>10hrs</b></p>  |
| <p><b>Execution of Speech-Language Therapy, Documentation and Professional Codes-</b></p> <p>4.1 Planning for speech and language therapy – goals, steps, procedures, activities</p> <p>4.2 Techniques for Speech and language therapy for various disorders of speech and language in Children</p> <p>4.3 Importance of behavioral principles in speech and language therapy</p> <p>4.4 Counseling and Guidance -Facilitation of parent participation and transfer of skills</p> <p>4.5 Documentation of clinical records</p> <p>4.6 Evaluation of therapy outcome</p> <p>4.7 Ethics in diagnosis and speech-language therapy</p> <p>4.8 Self-appraisal of clinicians</p> <p>4.9 Professional code of conduct for clinicians</p>            |                      |

## SECTION B

|   |         |
|---|---------|
| <b>Oral cavity, Pharynx, Esophagus and their Disorders-</b><br><br>3.1 Anatomy of the oral cavity<br>3.2 Common disorders of the oral cavity<br>3.3 Cleft lip and palate – medical aspects<br>3.4 Clinical anatomy and physiology of the pharynx<br>3.5 Inflammatory conditions of the pharynx, tonsils, and adenoids<br>3.6 Clinical anatomy and physiology of the esophagus<br>3.7 Clinical examination of the esophagus<br>3.8 Congenital and acquired diseases of the esophagus<br>3.9 Airway management  | 8 hours |
| <b>Larynx and its Disorders-</b><br><br>4.1 Clinical anatomy of the larynx<br>4.2 Difference between adult and infant larynx<br>4.3 Clinical examination of the larynx<br>4.4 Stroboscopy - technique, procedure, interpretation, and precautions<br>4.5 Congenital laryngeal pathologies<br>4.6 Inflammatory conditions of the larynx<br>4.7 Vocal nodule and other disorders of the vocal folds<br>4.8 Benign and malignant tumors of the larynx<br>4.9 Laryngectomy – overview of surgical procedure<br>4.10 Phono surgery and other voice restoration surgeries | 8 hours |

Books recommended.

### Common

1. Bernthal, J.E., Bankson, N.W., &Flipsen, P. (2013). Articulation and phonological disorders.(7th Ed.). Boston, MA:Pearson.
2. Dodd, B. (2013). Differential diagnosis and treatment of children with speech disorder.(2nd Ed). NJ: Wiley.
3. Rout, N (Ed)., Gayathri, P., Keshree, N, and Chowdhury, K (2015). Phonics and Phonological Processing to Develop Literacy and Articulation; A Novel Protocol. A publication by NIEPMED, Chennai. Freely downloadable from <http://niepmd.tn.nic.in/publication.php>. ISBN 978-81- 928032-9-5
4. Vasanta, D. (2014). Clinical applications of phonetics and phonology. ISHA Monograph.Vol 14, No. 1.Indian Speech & Hearing Association.
5. Velleman, S. L (2003). Resource guide for Childhood Apraxia of Speech.Delmar/Thomson Learning.
6. Williams, A., McLeod, S., & McCauley, R. (2010). Interventions for speech sound disorders in children. Baltimore: Brookes.

### Unit 1

7. Haynes.W.O., &Pindzola.R.H (2008) Diagnosis and Evaluation in Speech Pathology, 7<sup>th</sup>Edition, 44-55 Pearson &Ab.
8. Meitus,IJ & Weinberg,B (2000) Diagnosis in Speech-Language Pathology, Unit 2, 31-71, Allyn & Bacon.
9. Haynes.W.O., &Pindzola.R.H (2008) Diagnosis and Evaluation in Speech Pathology, 7<sup>th</sup>Edition, Unit 2 and 3, 37-43, Pearson & Ab.
10. Shipley.K.G., &Mc Afee, J.G (2008) Assessment in Speech-Language Pathology: A resource manual.

### Unit 2

11. Landis,K.,Woude,J.V., & Jongsma.A.E (2004) The Speech-Language Pathology Treatment Planner, John Wiley &Sons.

12. Anderson, C., & VanderderGag (2005) *Speech and Language Therapy: Issues in Professional Practice*, Whurr Publishers.

### **Unit 3**

13. Klein, H.B., & Nelson, M. (1994). *Intervention planning for children with communication disorders: A guide for clinical practicum and professional practice*. New Jersey. Prentice-Hall.
14. Hegde, M.N. (1985). *Treatment procedures in communicative disorders*. Texas. Pro-Ed.
15. Roth.P.F., & Worthington,M.S. (1996) *Treatment Resource Manual for Speech-Language Pathology, Unit 1, 1-40*, Singular Publishing Inc.

### **Unit 4**

16. Burrus,E.A., & Haynes, O.W (2009) *Professional Communication in Speech-Language Pathology: How to Write, Walk and act like a Clinician, Unit 3 and 4, 41-55*, Plural Publishing inc.
17. Beech.R.J., & Harding, L., & Jones,H.D. (1993) *Assessment in Speech-Language Therapy, Unit 1 and 2, 1-35*, Routledge

## **SECTION B**

1. Chan, Y. and Goddard, J.C. (2015). *K J Lee's Essential otolaryngology: head and neck surgery. (11th edition)*. New Delhi: Atlantic Publisher and Distributers
2. Dhingra, P. L. (2013). *Diseases of Ear, Nose, and Throat (Sixth edition)*.Elsevier.
3. O'Neill, J.P., and Shah, J.P. (2016). *Self-assessment in otolaryngology*.Amsterdam: Elsevier
4. Postic, W.P., Cotton, R.T., Handler, S.D. (1997). *Ear trauma. Surgical Pediatric Otolaryngology*. New York: Thieme Medical Publisher Inc.
5. Wackym, A. and Snow, J.B. (2015). *Ballenger's otorhinolaryngology head and neck surgery. (18th edition)*. United States: McGraw-Hill Medical

## B.Sc. Semester –II

### Subject: Audiological Evaluation Discipline Specific Course (DSC)

| Course No. | Type of Course | Theory / Practical | Credits | Instruction hour per week | Total No. of Lectures/Hours / Semester | Duration of Exam | Formative Assessment Marks | Summative Assessment Marks | Total Marks |
|------------|----------------|--------------------|---------|---------------------------|--|------------------|----------------------------|----------------------------|-------------|
| Course-2.2 | DSCT           | Theory             | 04      | 04                        | 56 hrs                                 | 2hrs             | 40                         | 60                         | 100         |

#### Course Outcome (CO):

After completion of course (Practical), students will be able to:

**CO 1 : Gain Knowledge about Pure tone Audiometry**

**CO 2 : Gain Knowledge about Speech Audiometry**

**CO 3 : Gain Knowledge about clinical masking**

**CO 4 : Gain Knowledge about calibration**

| Syllabus- Course 2.1 (Theory): Title- Audiological Evaluation   | Total Hrs: 40 |
|---|---------------|
| <b>Unit-I</b>   | <b>10hrs</b>  |
| <p><b>Pure tone Audiometry</b></p> <p>1.1 Historical developments, Rationale, Classification of audiometers, Instrumentation, Components and parts of an audiometer, Different types of transducers, their performance and technical specifications – Headphones (such as TDH-39, TDH-49, TDH-50, HDA-200, HDA- 500), Bone vibrators (such as B71, B -72, KH 70 &amp; A 20), Loudspeakers, Insert earphones (ER-3A, ER-5A), Microphones (Talk forward &amp; Talkback), VU meter, Ear cushions.</p> <p>1.2 Standards: National and International standards related to Pure tone Audiometry (ANSI, ISO, IEC, ASHA &amp; IS/BIS), Permissible Ambient Noise levels in audiometric test rooms.</p> <p>1.3 Audiogram, construction of audiogram, Symbols used, Interpretation of audiogram (degree, type &amp; configuration), Usefulness of Audiogram</p> <p>1.4 Bone conduction (BC) Audiometry: Importance, challenges in bone conduction testing</p> <p>1.5 Methods to find threshold (AC &amp; BC): Method of limits, Hughson &amp; Westlake method, Modified Hughson Westlake Method, ASHA guidelines, ANSI guidelines</p> <p>1.6 Factors affecting AC and BC threshold, Limitations of Pure-tone Audiometry</p> |               |
| <b>Unit-II</b>  | <b>10 hrs</b> |
| <p><b>Speech Audiometry</b></p> <p>2.1 Historical developments, rationale, and objectives</p>   |               |



|  |                      |
|--|----------------------|
| <p>2.2 Different types of speech tests - Speech detection threshold (SDT), Speech recognition threshold(SRT), speech identification scores (SIS) - Definition, Material used, Procedure for obtaining SDT, SRT, and SIS, Response mode and their clinical applications. BC Speech Audiometry</p> <ul style="list-style-type: none"> <li>• Correlation between PTA and speech audiometry results</li> <li>• PIPB function, Articulation Index,</li> <li>• National and International standards related to Speech Audiometry (ANSI, ISO, IEC, ASHA &amp;IS/BIS),</li> </ul> <p>2.3 Factors affecting speech audiometry, Limitations of Speech Audiometry</p> <p>2.4 Speech materials available in Indian languages and English for Speech Audiometry (SRT &amp;SIS)</p> <p>2.5 Loudness-based tests - MCL, UCL, Dynamic range - Definition, Materials used Procedure, and Clinical Applications.</p> |                      |
| <p><b>Unit-III</b></p>   | <p><b>10 hrs</b></p> |
| <p><b>Clinical Masking</b></p> <p>3.1 Definition, Terminology related to masking: Test ear, non-test ear, masker, masked, cross over, cross hearing, shadow curve, and central masking.</p> <p>3.2 Types of masking, Different types of stimuli used as maskers, Critical Band Concept.</p> <p>3.3 Interaural attenuation (IA), factors affecting IA. Criteria for masking during AC, BC, and factors considered.</p> <p>3.4 Factors determining the amount of masking noise- Minimum and Maximum effective masking level for AC and BC, speech.</p> <p>3.5 Procedures for masking – Methods to find masked threshold and factors to be considered inadequate masking, Naunton’s Dilemma, Rainville, SAL tests, and Fusion Inferred test(FIT)</p>  |                      |
| <p><b>Unit-IV</b></p>  | <p><b>10hrs</b></p>  |
| <p><b>Calibration</b></p> <p>4.1 Calibration of audiometers:</p> <ul style="list-style-type: none"> <li>• Subjective/real ear calibration methods for AC and BC</li> <li>• Electro-acoustic/objective calibration of the output intensity of Puretone, NBN, WBN, and Speech noise through the headphones, insert receiver loudspeaker and bone vibrators and frequency calibration, free field speakers’ calibration</li> </ul> <p>4.2 Calibration of the speech stimulus</p> <p>4.3 Daily listening checks, application of correction factors.</p> <p>4.4. Artificial ear, Acoustic couplers, and Artificial mastoid</p>  |                      |

## SECTION B

|  |                |
|--|----------------|
| <b>External and Middle Ear and their Disorders</b><br>1.1 Clinical anatomy of the ear<br>1.2 Congenital anomalies<br>1.3 Diseases of the external ear<br>1.4 Perforation and ruptures of tympanic membrane<br>1.5 Eustachian tube dysfunction<br>1.6 Otitis media with effusion<br>1.7 Cholesteatoma and chronic suppurative otitis media<br>1.8 Otosclerosis<br>1.9 Trauma to the temporal bone<br>1.10 Facial nerve and its disorder   | <b>8 hours</b> |
| <b>Inner Ear and its Disorders-</b><br>2.1 Congenital anomalies<br>2.2 Meniere's Disorder<br>2.3 Ototoxicity<br>2.4 Presbycusis<br>2.5 Disorders of the vestibular system<br>2.6 Vestibular Schwannoma<br>2.7 Tinnitus and medical line of treatment<br>2.8 Pre-surgical medical and radiological evaluations for implantable hearing devices<br><br>2.9 Overview of surgical technique for restoration and preservation of hearing<br>2.10 Post-surgical care and complication of surgery for cochlear implants<br>2.11 Overview of surgical technique, post-surgical care, and complication of surgeries for implantable | <b>8 hours</b> |

Books recommended.

## SECTION A

### Common

1. Durrant, J. D., &Feth, L. L. (2012). Hearing Sciences: A Foundational Approach (1 edition.). Boston:Pearson.
2. Emanuel, D. C., &Letowski, T. (2008). Hearing Science (1 edition.). Philadelphia: Lippincott Williams and Wilkins.
3. Gelfand, S. A. (2009). Hearing: An Introduction to Psychological and Physiological Acoustics (5 edition.). London: CRC Press.
4. Katz, J. (2014). Handbook of Clinical Audiology (7th International edition.). Lippincott Williams and Wilkins.
5. Martin, F. N., & Clark, J. G. (2014). Introduction to Audiology. Boston: Pearson.

## SECTION B

7. Chan, Y. and Goddard, J.C. (2015). K J Lee's Essential otolaryngology: head and neck surgery. (11th edition). New Delhi: Atlantic Publisher and Distributers
8. Dhingra, P. L. (2013). Diseases of Ear, Nose, and Throat (Sixth edition).Elsevier.
9. O'Neill, J.P., and Shah, J.P. (2016). Self-assessment in otolaryngology.Amsterdam: Elsevier
10. Postic, W.P., Cotton, R.T., Handler, S.D. (1997). Ear trauma. Surgical Pediatric Otolaryngology. New York: Thieme Medical Publisher Inc.
11. Wackym, A. and Snow, J.B. (2015). Ballenger's otorhinolaryngology head and neck surgery. (18th edition). United States: McGraw-Hill Medical

## Semester –II

### Subject: Clinical psychology Open Elective Course (OEC-2.1)

| Course No. | Type of Course | Theory / Practical | Credits | Instruction hour per week | Total No. of Lectures/Hours / Semester | Duration of Exam | Formative Assessment Marks | Summative Assessment Marks | Total Marks |
|------------|----------------|--------------------|---------|---------------------------|--|------------------|----------------------------|----------------------------|-------------|
| 2.1        | OEC 2.1        | Theory             | 03      | 03                        | 42 hrs                                 | 2hrs             | 40                         | 60                         | 100         |

After completion of course, students will be able to:

**CO 1 : Basic concepts in psychology**

**CO 2 : various clinical methods in psychology**

**CO 3 : Developmental psychology**

**CO 4 Learning, Behavior Modification and Counseling**

**: Basic concepts in Pediatrics-Genetics in Communication Disorders**

|  |               |
|--|---------------|
| <b>Unit 1</b>  |               |
| <b>Basic Concepts in Psychology</b><br>1.1 Introduction to psychology: Definition, history & schools of psychology<br>1.2 Scope of psychology<br>1.3 Meaning & definition of clinical psychology<br>1.4 Historical development, the modern history of clinical psychology<br>1.5 Current status of clinical psychology<br>1.6 Scope as a specialty (clinical psychology) in health sciences<br>1.7 Role of clinical psychology in speech and hearing<br>1.8 Concept of normality<br>1.9 Concept of abnormality<br>1.10 Models of mental disorders: Biological, psychological and social models | -10 Hrs       |
| <b>Unit 2</b>  |               |
| <b>Clinical Methods</b><br>2.1 Methods in clinical psychology <ul style="list-style-type: none"> <li>• Case history</li> <li>• Clinical interviewing</li> <li>• Clinical observation</li> <li>• Definition &amp; types of psychological testing</li> <li>• Assessment of cognitive functions</li> <li>• Adaptive functions,</li> <li>• Personality</li> </ul>  | <b>10 Hrs</b> |

|  |               |
|--|---------------|
| <ul style="list-style-type: none"> <li>Behavioral assessment</li> </ul> <p>2.2 Classification of abnormal behavior</p> <ul style="list-style-type: none"> <li>History, need rationale of classification</li> </ul> <p>2.3 Current classificatory systems:</p> <ul style="list-style-type: none"> <li>DSM</li> <li>ICD</li> </ul>   |               |
| <b>Unit 3</b>  |               |
| <p><b>Developmental Psychology</b></p> <p>3.1 Child &amp; developmental psychology: Meaning, definition &amp; scope</p> <ul style="list-style-type: none"> <li>Meaning of growth, development &amp; maturation</li> <li>Principles of child development</li> </ul> <p>3.2 Motor development: general principles of motor development</p> <ul style="list-style-type: none"> <li>Stages in motor development: early motor development, motor development during later childhood and adolescence, decline with age</li> </ul> <p>3.3 Cognitive development: growth from early childhood to adolescence</p> <ul style="list-style-type: none"> <li>Piaget's theory of cognitive development</li> </ul> <p>3.4 Emotional development</p> <p>3.5 Social development</p> <p>3.6 Development of play behavior</p> | <b>10Hrs</b>  |
| <b>Unit 4</b>  |               |
| <p><b>Learning, Behavior Modification and Counseling</b></p> <p>4.1 Learning: Meaning, definition &amp; characteristics</p> <p>4.2 Theories of learning:</p> <ul style="list-style-type: none"> <li>Introduction</li> <li>Pavlov's classical conditioning: experiments &amp; principles</li> <li>Skinner's operant conditioning: experiments &amp; principles</li> </ul> <p>4.3 Therapeutic techniques based on learning principles:</p> <ul style="list-style-type: none"> <li>Skill behavior techniques</li> <li>Problem behavior techniques</li> </ul> <p>4.4 Counseling: Introduction &amp; definition</p> <p>4.5 Types of counseling: Directive &amp; non-directive</p> <p>4.6 Characteristics of a good counselor</p> <p>4.7 Documentation in counseling and follow up methods</p>                   | <b>12 Hrs</b> |

## Books recommended

### Common

- Morgon C.T., King R.A., Robinson N.M. Introduction to Psychology. Tata McGraw Hill Publishing Co.
- Anastasi, A. (1999). Psychological testing, London: Freeman
- Baura, M (2004). Human Development and Psychology, Rehabilitation Council of India, New Delhi. ISBN: 81-7391-868-6
- Coleman J.C. Abnormal Psychology and Modern Life, Taraporevala Sons & Co.
- Gregory, R.J. (2000). Neuropsychological and geriatric assessment in Psychological Testing: History, Principles, and Applications (3rd ed.). New York: Allyn & Bacon.
- Lezak, M., Loring, D.W. and Hannay, H.J. (2004). Neuropsychological Assessment. Fourth Edition. New York: Oxford University Press

## Unit1

7. Morgon C.T., King R.A., Robinson N.M. Introduction to Psychology. Tata McGraw Hill Publishing Co.
8. Coleman J.C. Abnormal Psychology and Modern Life, Taraporevala Sons & Co.
9. Sadock, B.J., & Sadock, V.A. (2000). Comprehensive textbook of Psychiatry. New York: Lippincott Williams & Wilkins.

## Unit 2

10. Anastasi, A. (1999). Psychological testing, London: Freeman
11. Gelso, C.J. & Fretz, B.R. (1995). *Counseling Psychology*. New Delhi: A Prism Indian Edition.
12. Hansen, J.C., Stevic, R.R. & Warner, R.W. (1987). *Counseling*. Boston: Allyn & Bacon, Inc.,
13. Nelson-Jones, R. (1999). *Introduction to Counseling Skills*. London: Sage Publications.
14. Palmer, S. (1999). *Introduction to Counseling and Psychotherapy*. London: Sage Publications.
15. Corey, G. (2011). Theory and practice of group counseling. 8<sup>th</sup> Edition. California: Brooks/Cole Publishing Company.
16. Corey, G. (2001a). *The art of integrative counseling*. Pacific Grove, CA: Brooks/Cole.
17. Corey, G. (2008). Theory and practice of counseling and psychotherapy. California: Brooks/Cole.
18. Corey, G., Corey, C., and Corey, M.S. (2008). Groups: Process and Practice. California: Brooks/Cole.
19. Handbook of counseling psychology by Woolfe and Dryden, Sage, New Delhi, 1996.
20. Improving treatment compliance: counseling and systems strategies for substance abuse and dual disorders, by Dennis C. Daley.
21. Jacobs, Ed. E., Masson, R.L. & Harvill, R.L. (1998). *Group Counseling: Strategies & Skills*. Pacific Grove, CA: Books / Cole Pub. Co.
22. Madden, G.R. (1998). *Legal Issues in Social Work: Counseling and Mental Health*. Thousand Oaks: Sage Publications.
23. *Intentional interviewing and counseling: facilitating client development in a multicultural society* by Allen E. Ivey, Wadsworth Co. 1998.

## Unit 3

24. Hurlock, E.B. (1981). *Child development VI* Ed. Mc Graw Hill International Book Co

## Unit 4

25. Mazur (1994). *Learning & Behavior*. UK: Prentice – Hall International, Inc. Bloom, F. & Lazeron, A. (1996). *Brain, mind, and behavior* (2nd ed.). New York: Freedman.
26. Kolb, B. & Wishaw, I.Q. (1996). *Fundamentals of human neuropsychology* (4th ed.). New York: Freeman Press.
27. Grant, I. & Adams, K. (1996). *Neuropsychological assessment of neuropsychiatric disorders*. New York: Oxford University Press.
28. Tuokko, H., and Hadjistavropoulos, T. (1998). *An assessment and guide to geriatric neuropsychology*. London: Lawrence Erlbaum.
29. Gregory, R.J. (2000). *Neuropsychological and geriatric assessment in Psychological Testing: History, Principles, and Applications* (3rd ed.). New York: Allyn & Bacon.
30. Caley, A. (1999). *Assessment of Neuropsychological Functions in Psychiatric Disorders*. New York: American Psychiatric Publishing.
31. Lezak, M., Loring, D.W., and Hannay, H.J. (2004). *Neuropsychological Assessment*. Fourth Edition. New York: Oxford University Press.
32. Schoenberg, M.R. and Scott, J.G. (Eds.). (2011). *The little black book of Neuropsychology: A Syndrome based Approach*. New York: Springer- Verlag.
33. Sohlberg, M.M., and Mateer, C.A. (2001). *Cognitive Rehabilitation: An Integrative Neuropsychological Approach*. New York: The Guilford Press.

# B.Sc., BCA., B.Sc.(Pulp & Paper Science) B.A.S.L.P (Hon)

## Semester – II

### Subject: Generic English 2

#### Ability Enhancement Compulsory Course

#### (AECC)AECC-2

| Course No. | Type of Course | Theory / Practical | Credits | Instruction hour per week | Total No. of Lectures/Hours / Semester | Duration of Exam | Formative Assessment Marks | Summative Assessment Marks | Total Marks |
|------------|----------------|--------------------|---------|---------------------------|--|------------------|----------------------------|----------------------------|-------------|
| Course-02  | AECC           | Theory             | 03      | 04                        | 42 hrs                                 | 2hrs             | 40                         | 60                         | 100         |

Title of the Course: **Generic English 2**

#### Course Outcome (CO):

After completion of course, students will be able to:

1. This paper aims at introducing English poetry and prose to develop reading and comprehensionskills.
2. It teaches them the basics of communicative English.
3. Speaking Skills
4. Vocabulary development

| Syllabus- AECC- 2: Title- Shalmala |  | Total Hrs:<br>42 |
|------------------------------------|--|------------------|
| <b>Unit -1</b>                     | <b>Prose</b>   | <b>14 hrs</b>    |
| <b>Chapter No 1.</b>               | Sparrows - K. A. Abbas   |                  |
| <b>Chapter No 2.</b>               | An Astrologer's Day - R. K. Narayan  |                  |
| <b>Chapter No 3.</b>               | The Function of Education - J. Krishnamurti  |                  |
| <b>Unit - 2</b>                    | <b>Poetry</b>  | <b>14 hrs</b>    |
| <b>Chapter No 4.</b>               | The World is Too Much With Us - William Wordsworth   |                  |
| <b>Chapter No 5.</b>               | Prayer Before God - Louis MacNeice   |                  |
| <b>Chapter No 6.</b>               | Gandhi - Niranjan Mohanty  |                  |
| <b>Unit - 3:</b>                   | <b>Grammar and Speaking Skills</b>   | <b>14 hrs</b>    |
| <b>Chapter No 7.</b>               | Correction of Errors,  |                  |
| <b>Chapter No 8.</b>               | Combining sentences with appropriate conjunctions  |                  |
| <b>Chapter No 9.</b>               | Use of adverbs and adjectives,   |                  |
| <b>Chapter No 10.</b>              | Dialogue Writing: Common situations  |                  |
|                                    | Short speeches for welcoming, introducing, proposing vote of thanks and Teachers Day, Gandhi Jayanti, Independence Day and Republic Day etc. |                  |
| <b>Chapter No 11.</b>              | One-word substitution (See Annexure-2)   |                  |
| <b>Chapter No 12.</b>              | Collocations (See Annexure-2)  |                  |

1. **Text Books: Timeless Wisdom**, Board of Editors, Orient Blackswan, Hyderabad Hyderabad
2. **Suggested Reading: R. P. Singh's Functional Skills in Language and Literature**, OUP

# Syllabus for B.Sc/B.Sc (CS)/BCA

## II Sem MIL Additional English-2 (AECC)

80 marks paper for 3 hours duration and 20 marks for Internal Assessment  
45 hrs Syllabus for 3 Credits

### Teaching Hours: 3 Hours (per week)

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#### Course and Skill Outcome

1. This paper introduces the students to appreciate short stories in English.
2. It teaches them how to expand an idea or proverb into paragraph and other writingskills.

#### I. Text Book – **Twelve Short Stories**, ed C. M. Sharma, OUP

1. How Much Land Does a Man Need? - Leo Tolstoy
2. A True Story - Mark Twain
3. My Uncle Jules - Guy de Maupassant
4. The Mother - Somerset Maugham

#### II. Grammar and Composition: Expansion of an idea and proverb, Letters of Congratulations and Compliments, Paragraph writing on current topics

#### Pattern of Question Paper

#### Marks

- |  |         |
|--|---------|
| 1. Objective type Questions                                  | 10x1=10 |
| 2. Reference to Context (two out of four)                    | 2x5=10  |
| 3. Essay type questions on short stories<br>(One out of two) | 10      |
| 4. Essay type questions on short stories<br>(One out of two) | 10      |
| 5. Short notes on short stories<br>(One out of two)          | 2x5=10  |
| 6. Expansion of an idea and proverb (2x5)                    | 10      |
| 7. Letters of Congratulations and Compliments                | 10      |
| 8. Paragraph writing on current topics                       | 10      |





## B.Sc. Semester –II

### Subject: Clinical (Speech Language Pathology) Discipline Specific Course (DSCP 2.3)

| Course No. | Type of Course | Theory / Practical | Credits | Instruction hour per week | Total No. of Lectures/Hours / Semester | Duration of Exam | Formative Assessment Marks | Summative Assessment Marks | Total Marks |
|------------|----------------|--------------------|---------|---------------------------|--|------------------|----------------------------|----------------------------|-------------|
| Course-2.3 | DSCP           | Practical          | 02      | 4                         | 52 hrs                                 | -                | 25                         | 25                         | 50          |

Course No.1 (Practical): Title of the Course (Practical): **Clinical (Speech Language Pathology)**  
After completion of course (Practical), students will be able to:

#### Course Outcome (CO):

After completion of course, students will be able to:

**CO 1** : Carry out clinical counseling

**CO 2** : carry out perceptual analysis

**CO 3** : to write diagnostic report

**CO 4** : Carry out speech audiometry

**CO 5** : knowledge about various speech and language techniques

**CO 6** Case history taking

#### List of the Experiments for 96 hrs / Semesters

1. Study the available normative data (Indian/Western) of language such as phonology, semantics, syntax, morphology, and pragmatic measures.
2. Perceptual analysis of speech and language parameters in normal (2 children and 2 adults) and persons with speech disorders (3 adults + 3children).
3. Prepare a model diagnostic report of a patient with speech and language disorder.
4. Prepare a diagnostic and therapy kit.
5. Make a list of speech-language stimulation techniques and other therapy techniques for various speech disorders.
6. Familiarize with the sources for referral and parent counseling procedures.
7. Prepare a report on the available audiovisual material and printed material/pamphlets relating to speech-language pathology, public education of communication and hearing disorders, etc.
8. Prepare a report on the available clinical facilities and clinical activities of the institute.

9. Observe the evaluation process and counseling of at least 5 different speech and language disorders in children.
10. Observe the evaluation process and counseling of at least 5 different speech and language disorders in adults.
11. Take case-history of a minimum of 10 individuals (5 normal & 5 clients with complaints of speech-language problems).
12. Observation of diagnostic procedures.
13. Observe various therapeutic methods carried out with children and adults with speech and language disorders.

## BASLP Semester –II

### Subject: Clinical (Audiology) Discipline Specific Course (DSCP 2.4)

| Course No. | Type of Course | Theory / Practical | Credits | Instruction hour per week | Total No. of Lectures/Hours / Semester | Duration of Exam | Formative Assessment Marks | Summative Assessment Marks | Total Marks |
|------------|----------------|--------------------|---------|---------------------------|--|------------------|----------------------------|----------------------------|-------------|
| Course-2.4 | DSCP           | Practical          | 02      | 4                         | 52 hrs                                 | -                | 25                         | 25                         | 50          |

#### Course Outcome (CO):

After completion of course, students will be able to:

**CO 7** : Carry out clinical masking

**CO 8** : Carry out pure tone audiometry

**CO 9** : Perform otoscopy

**CO 10** : Carry out speech audiometry

**CO 11** Measure difference limen of intensity, frequency, and duration

**CO 12** Case history taking

**CO 13** Tuning fork tests

**CO 14** Plot audiogram

#### List of the Experiments for 52 hrs / Semesters

1. Calculate the relative intensities with different reference intensities.
2. Calculate decibels when sound intensities are doubled, increased by 4times
3. Carry out pure tone and speech audiometry on 10 normal-hearing individuals.
4. Carry out clinical masking on 10 normal hearing individuals with simulated conductive hearing loss and carry out clinical masking on 5 individuals with conductive hearing loss and 5 individuals with sensorineural hearing loss.
5. Carry out daily listening checks and subjective calibrations 20 times and observe objective calibration once
6. Perform otoscopy and draw the tympanic membrane of 10 healthy normal individuals
7. Measure difference limen of intensity, frequency, and duration on 10 normal-hearing adults and plot it in graphical form and interpret the results
8. Measure equal loudness level contours at a minimum level, 40 dB SPL, 70 dB SPL (1 kHz) in 5 normal-hearing adults
9. Take case history on 5 adults and 5 children with a hearing problem and correlate the

information from case history to results of pure tone audiometry

10. Administer different tuning fork tests on 5 simulated conductive and 5 sensorineural hearing loss individuals
11. Observe case history being taken on 5 adults and 5 children with a hearing problem and correlate the information from case history to results of pure tone audiometry.
12. Administer different tuning fork tests on 5 conductive and 5 sensorineural hearing loss individuals.
13. Observe the pure tone audiometry being carried out on 30 clients.
14. Plot the audiogram, calculate the pure tone average, and write the provisional diagnosis of observed clients.
15. Perform otoscopy (under supervision) on at least 1 client with the following conditions:  
Tympanic membrane perforation, SOM, CSOM.

**Details of Formative assessment (IA) for DSCC theory/OEC: 40% weight age for total marks**

| Type of Assessment  | Weight age                                      | Duration | Commencement          |
|---|---|----------|-----------------------|
| Written test-1  | 15%   | 1 hr     | 8 <sup>th</sup> Week  |
| Written test-2  | 15%   | 1 hr     | 12 <sup>th</sup> Week |
| Case study / Assignment / Field work / Project work/ Activity | 10%   | -----    | --                    |
| Total   | 40% of the maximum marks allotted for the paper |          |                       |

**Faculty of Science  
04 - Year UG Honors programme:2021-22**

**GENERAL PATTERN OF THEORYQUESTION PAPER FOR DSCC/ OEC  
(60 marks for semester end Examination with 2 hrs duration)**

**Part-A**

1. Question number 1-06 carries 2 marks each. Answer any 05 questions : 10marks

**Part-B**

2. Question number 07- 11 carries 05Marks each. Answer any 04 questions : 20 marks

**Part-C**

3. Question number 12-15 carries 10 Marks each. Answer any 03 questions : 30 marks

(Minimum 1 question from each unit and 10 marks question may have sub questions for 7+3 or 6+4 or 5+5 if necessary)

**Total: 60 Marks**

**Note: Proportionate weight age shall be given to each unit based on number of hours prescribed.**

