



SPPA 6330: Neuromuscular Disorders
Spring Semester, 2015
Subhash Bhatnagar, Ph.D.

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Time 5:30-8:00pm TH

Room Cramer 46

Office Hours W 10:00-11:00

Learning Objectives:

- Outline the neurophysiology of motor-speech processes;
- Apply the motor system neurophysiology to motor speech functions;
- Discuss the anatomy of cranial nerve functions;
- Explain motor speech based functions of cranial nerves;
- Outline a neurologically based assessment of oral facial structures
- Distinguish among dysarthria syndromes based on motor physiology;
- Explain the speech characteristics of different dysarthria types;
- Discuss the assessment scope of dysarthria;
- Discuss treatment for impaired motor speech processes;
- Describe the differential diagnosis of dysarthria, apraxia, and apraxia of speech;
- Explain neurolinguistic mechanisms and types of apraxia;
- Outline the methods used for the treatment of apraxia of speech;
- Manage motor speech problems associated with spinal cord injuries;
- **Explain issues related to federal reimbursement;

Prerequisites and expectations:

SPPA 6160-101

Neurological Bases of Speech and Language Disorders

Meets the ASHA Standards for Certification (9/1/2014)

Knowledge Outcomes: IV-A, IV-B, IV- C, IV-D, IV-E, IV- F, IV-G
Skill Outcomes V-A and V-B

Meet the WI-DPI Standards for each:

Satisfactory completion of this course is intended to assist students in meeting the following requirements DPI WI Licensure:
Standard 1e Typical and Atypical Speech, Language and Hearing

Requirements for a letter Grade:

1. Clinical management of MSD (4 points). Required activity.

- 2 hours of diagnostic work (testing tool (s), data collection, interpretation, and conclusion) OR therapeutic work (diagnosis, activity purpose, effectiveness, and conclusion), OR 3 hours of TX/DX observation (diagnostic procedures, description of tx or dx tools, interpretation, and conclusion).
 - The report should be between 100-200 words.
 - Must be completed in the Fall, 2014 or Spring semester, 2015 at MU Speech and Hearing Clinic.
 - **Submit the signed printed document in the last class.**

2. Clinical presentation (8 points). Required activity.

- PP submission between 8:00 to 11:00 on the presentation day
 - March 26, 2014 to Megan Devine
- Case study (Last name, First name, Book Case Number)

3. Three objective exams (28X3 points). Required activity.

- 3rd exam is cumulative (About 70% sectional).
- Each examination will cover assigned book readings, class/guest lectures, and discussions, and each will derive material related to sensorimotor physiology covered in SPPA 6160.

4. Class participation (4 points). Required activity.

Examinations	84 Points (each exam 28 Points)
MSD management	4 Points
Presentation	8 Points
Participation	4 Points (excluding presentation)

Evidence Policy

- The clinical faculty will sign if the student's clinical work is being supervised by this instructor.
- For the observation hours, students will seek the signature of the attending graduate clinicians.
- Students using the video bank will submit their signed (Joe) hours only for the class.

Grading Criterion

A	94-100
AB	89- 93
B	83- 88
BC	78- 82
C	73-77

Library Code- DYSARTHRIAS

Required References:

- JRD: Duffy, JR. *Motor Speech Disorders: Substrates, Differential Diagnosis, and Management*. St. Louise, Mosby, 2013. RC 423. D84 2013.

Consulting References:

- SCB: Bhatnagar, Subhash C. *Neuroscience for the Study of Communicative Disorders (Ch. 17)*. Lippincott Williams & Wilkins. RC 423.B53, 2013.

TF32 Link- <http://userpages.chorus.net/cspeech/>

Additional References

- MM: Malcolm McNeil. *Clinical Management of Sensorimotor Speech Disorders*. New York, Thieme, 2009. RC 424. C576, 2009.
- NRC: Stephen Nadeau, Leslie J.G. Rothi, and Bruce Crosson. *Aphasia and Language*. Guilford Press. RC 425 .A63, 2000.
- DAB: Darley, Aronson and Brown. (DAB) *Motor Speech Disorders*. W.B. Saunders. RC 423 D.25, 1976.
- YBB: Yorkston and Beukelman. *Assessment of intelligibility of dysarthric speech*, Tigard, OR: CC Publication. RC 424.7 Y66, 1981.

Attendance Policy:

Attendance at all class meetings is expected, since an absence prevents students from obtaining the full benefit of the course. Further, on-time attendance in class is an important component of professional behavior. Examinations missed because of an absence cannot be made up unless an official excuse is presented, and this examination can only be taken during the final examination week. Responsibility for catching up on information missed in the class lies with the student. Also see the Departmental Attendance Policy

Acceptable Anticipated Absences (Departmental Policy)

- The student is away from campus representing an official university function, e.g., participating in a professional meeting, as part of a judging team, or athletic team.
- Required court attendance as certified by the Clerk of Court
- Religious observances when certified by a letter from the student's parent(s) or religious leader.
- Required military duty as certified by the commanding officer.
- Acceptable emergency absences:
 - Illness or injury when certified by an attending physician, dentist, or nurse. The certification should show the date that the service was provided to the student but should not describe the nature of that service.
 - Death or serious illness in the immediate family (parents, step-parents, siblings, spouse, children, step-children, foster children, in-laws, sibling in-laws, grandparents, great grandparents, step-great grandparents, grandchildren, aunts, uncles, nieces, and nephews)

when certified by a letter from the student's parent(s) or spouse.

Critical Dates:

February	12	Examination One
March	26	Presentations
April	9	Presentations
April	9	Examination Two
April	30	Submission for requirements
May	7	Examination Three (final)

January 15 Orientation

SECTION ONE: Introduction to Motor Speech Disorders

January 15

- **On the Scope of Motor Speech Disorders**
 - Defining and understanding of motor speech disorders
 - Differential diagnosis of dysarthria

Readings: JRD Chapter 1 (pages, 3-14)
 Class Notes

SECTION TWO: Neurophysiology of Motor System and Cranial Nerves

January 22 and 29

- Neurophysiology of Motor Speech
 - Readings: JRD Chapter 2 (pages 15-60)
 - SCB Chapters (13-14 (pages, 295-358))
- Cranial Nerves Synopsis
 - Functions
 - Classifications
 - Distributions
 - Clinical considerations
 - Assessment

Readings: JRD Chapter 2, (pages, 15-60)
 SCB Chapter 17 (pages, 360-412)

February 5

- Neurologically based motor speech examination
 - Readings: JRD Chapter 3 (pages, 61-94)
 - SCB Chapter 17 (pages, 360-412)

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February 12 Examination One (class meets after the exam)

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SECTION THREE: Dysarthrias Descriptions

February 12, 19, 26

- Flaccid Dysarthrias
 - Clinical characteristics
 - Speech effects
 - Diseases
 - Speech sample

Readings: JRD Chapter 4, (pages 95-124)

- Spastic Dysarthrias
 - Clinical characteristics
 - Effects on speech mechanisms/systems
 - Diseases
 - Speech sample

Readings: JRD Chapter 5, (pages 125-142)

- Ataxic Dysarthria
 - Anatomical concepts
 - Clinical characteristics
 - Effects on speech mechanisms/systems
 - Diseases
 - Speech sample

Readings: JRD Chapter 6, (pages 143-164)

- Hypokinetic Dysarthria
 - Anatomical concepts
 - Clinical characteristics
 - Effects on speech mechanisms/system
 - Diseases
 - Speech sample

Readings: JRD Chapter 7, (pages 165-190)

- Hyperkinetic Dysarthria
 - Anatomical concepts
 - Clinical characteristics
 - Effects on speech mechanisms/systems
 - Diseases
 - Speech sample

Readings: JRD Chapter 8, (pages 191-222)

- Mixed Dysarthrias
 - Anatomical concepts

- Clinical characteristics
- Effects on speech mechanisms/systems
- Diseases
- Speech sample
- Readings: JRD Chapter 10, (pages 239-268)

SPRING BREAK (March 12)

SECTION FOUR: Management of Dysarthrias

March 5 and 19

- Assessment
 - Readings: JRD Chapter 3, (pages 61-94)
 - Frenchay Test
 - YBB Test of Intelligibility
 - Dabul's Apraxia Testing Battery
- Treatment
 - Readings: JRD Chapters 16 (pages, 379-404), 17 (405-442)

March 26 *Presentations

April 2 (Easter, No Class)

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April 9, EXAMINATION TWO

**Presentations

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SECTION FIVE Medical Management Issues

April 16 Heidi Ruedinger, MS. CCC-SLP

Medicare Reimbursement and Documentation

Readings: Class Notes

SECTION SEVEN: Apraxias

April 23, 30

Readings: Gschwind, N. "The Apraxias: Neural Mechanism of
The Disorders of Learned Movement" Am. Scien. 1969
JRD Chapter 18 (pages 443-458)
NRC Chapter 9 (pages 221-266)

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FINAL EXAMINATION:

Thursday May 7, 5:45-7:45 (5:00 ?)

Cramer 46

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Videotapes available to you in the library.

- 1 Beyond (pa, ta, ka): Evaluation of the Speech and Swallowing Mechanism. Tape 1 and 2 Sci AVM QP 306 .E92 1988
2. Muscular dystrophy. RC 377 .M83, 1987.
3. Multiple sclerosis. RC 933.M7, M87, 1990.