



# California State University, Sacramento

## Department of Communication Sciences and Disorders

### UNDERGRADUATE SYLLABUS & COURSE OUTLINE

Semester/Year: Spring 2020	Course: CSAD 127 Introduction to Medical Speech Pathology	Section: 03
Meeting Days: Tuesday/Thursday	Meeting Times: 4:30PM – 5:45PM	Location: Folsom Hall 2604
Instructor: Dr. Aishah Y. Patterson, CCC-SLP	Email: <a href="mailto:patterson@csus.edu">patterson@csus.edu</a>	Phone: 916-278-7341
Office Location: Folsom Hall 2316	Office Hours/Appointments: Tuesdays 12:00PM – 2:00PM / Thursdays 12:30PM – 1:30PM or by appointment	

#### Catalogue Course Description:

**CSAD 127 Introduction to Medical Speech Pathology**

**3 Units**

**Prerequisite(s):** [CSAD 123](#), [CSAD 125](#), [CSAD 126](#), [PSYC 2](#), [STAT 1](#), [CHDV 30](#), and [DEAF 51](#).

**Term Typically Offered:** Spring, Summer

Current concepts regarding anatomy and physiology, etiology, assessment, and treatment of craniofacial disorders, laryngectomy, tracheostomy and dysphagia.

#### Place of Course in Program:

CSAD 127 Introduction to Medical Speech Pathology is typically taken in the spring semester of year 4 of the B.S. degree program. Within the 2<sup>nd</sup> B.S. 4-semester degree program, CSAD 127 is taken in the summer of semester 3.

Sacramento State Baccalaureate Learning Goals for the 21st Century (BLG)	Addressed by this course (Y/N)
<b>Competence in the Disciplines:</b> <i>The ability to demonstrate the competencies and values listed below in at least one major field of study and to demonstrate informed understandings of other fields, drawing on the knowledge and skills of disciplines outside the major.</i>	Y
<b>Knowledge of Human Cultures and the Physical and Natural World:</b> <i>Through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts. Focused by engagement with big questions, contemporary and enduring.</i>	Y
<b>Intellectual and Practical Skills, including:</b> <i>Inquiry and analysis, critical, philosophical, and creative thinking, written and oral communication, quantitative literacy, information literacy, teamwork and problem solving, practiced extensively, across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance.</i>	Y
<b>Personal and Social Responsibility, including:</b> <i>Civic knowledge and engagement—local and global, intercultural knowledge and competence*, ethical reasoning and action, foundations and skills for lifelong learning anchored through active involvement with diverse communities and real-world challenges.</i>	Y
<b>Integrative Learning**, including:</b> <i>Synthesis and advanced accomplishment across general and specialized studies.</i>	Y

## Course Learning Outcomes:

### UNDERGRADUATE

Mastery of each student-learning outcome listed below is indicated by a grade of C or better on each component of the corresponding measures listed in the table. Students are required to track their progress toward meeting each learning outcome and must make an appointment with the instructor for any grade equal to or less than a C. The instructor will suggest strategies to help you establish competence and knowledge in these areas.

Students should track their progress toward meeting each learning outcome by listing their grades on the table below over the course of the semester.

### CSAD 127 SPECIFIC STUDENT LEARNING OUTCOMES:

1. Recognize the speech-language pathologist's roles, responsibilities and scope of practice within the medical setting.
2. Recognize and understand types of medical reporting, documentation and terminology.
3. Identify health care personnel specific to the medical setting.
4. Identify the anatomical, physiological, social, cultural and psychological correlates of neurologically based communication disorders that impact language, speech, cognition, voice and swallowing.
5. Explain assessment procedures (including imagine techniques, instrumentation and formal/informal assessments) and management options for patients with neurologically based communication disorders, dysphagia, head and neck cancer and genetic syndromes.
6. Identify anatomical structures specific to patient populations post-laryngectomy and prior to cleft lip and palate repair.
7. Identify and differentiate various alaryngeal speech options post-laryngectomy.
8. Interpret evidence-based practices specific to the assessment and management of patients in medical settings.
9. Recognize ethical violations in medical speech pathology and understand presented solutions.
10. Discuss surgical, prosthetic and speech therapy options used to treat cleft lip and palate.

Course Learning Outcome	Components Indicating Competence	Grades Received
1 – 3	Exam 1; Assignment 1	
4 – 5	Exams 1, 2, 3 and 4; Assignments 1, 2, 3, 4 and 5; Class participation	
6	Exams 3 and 4; Assignment 5; Class Participation	

7	Exam 3; Assignment 5; Class participation	
8	Exams 1, 2, 3, and 4; Assignments 1, 2, 3, 4 and 5; Class participation	
9 – 10	Exam 4; Class participation	

### Textbooks and Materials:

Johnson, A. F. (2017). *Medical speech-language pathology: A practitioner's guide* (3<sup>rd</sup> ed.). New York, NY: Thieme Publishers ISBN: 9781604063967

The course textbook is available online through the CSUS Library (eBook Central Academic Complete):  
<https://ebookcentral.proquest.com/lib/csus/detail.action?docID=4718698>

### Supplemental Readings:

Supplemental reading and available audio/video material, assigned or otherwise referred to during the course, will be placed online and/or library reserve for student access.

### Online Resources:

<http://canvas.csus.edu/>

This course is paired with Canvas, an online learning resource. Students are required to log onto <https://my.csus.edu/> (accessible from any computer with an internet connection and up-to-date web browser) **regularly** to access posted course materials, resources, announcements and grades. Additional assistance with Canvas is available through Information Resources & Technology (IRT) at:

<https://www.csus.edu/information-resources-technology/get-support-consultation/service-desk.html>.

In person support is available at the AIRC, Rm 2005 (Monday – Friday, 8:00am – 5:00pm). Need help? Phone (916) 278-7337 or email [servicedesk@csus.edu](mailto:servicedesk@csus.edu).

### Course Requirements/Components:

Participation in this course will minimally require the completion of four (4) multiple-choice/short answer exams (worth 50 points each) and five (5) written assignments (worth 20 points each). There will be 33 points distributed throughout the semester for attendance/participation (*unannounced*).

### Grading Policy:

There are 333 points available for the course. There is **no** extra credit anticipated for this course. An exception will be made in the event that a guest lecture or relevant learning experience **cannot** be scheduled during the regular class period. Under such circumstances, the extra credit option (paired with an alternative assignment) will become available, with additional credit **not** exceeding 10 points.

Please secure a **Scantron 883-E/ES** for each exam. Please keep them in good condition, otherwise the mechanical reader will be unable to score them.

Source	Points	Percentage of Grade
Exams (4)	200	60%
Written Assignments (5)	100	30%
Attendance/Participation	33	10%
<b>Total</b>	<b>333</b>	<b>100%</b>

Letter grades are assigned according to the following points:

Points	Percent	Letter
333 – 309	100 – 93%	A
308 – 299	92 – 90%	A-
298 – 289	89 – 87%	B+
288 – 275	86 – 83%	B
274 – 265	82 – 80%	B-
264 – 255	79 – 77%	C+
254 – 242	76 – 73%	C
241 – 232	72 – 70%	C-
231 – 222	69 – 67%	D+
221 – 209	66 – 63%	D
208 – 199	62 – 60%	D-
≤ 198	≤ 59%	F

### Course Policies/Procedures:

CSAD 127 (Section 03) meets on Tuesdays and Thursdays from 4:30pm – 5:45pm in Folsom Hall (FLS), room 2604. Meetings will consist of lectures, small and large group discussions, in and out of class assignments and invited speakers (to be arranged).

#### Office Hours:

Office hours are drop-in and provided weekly on **Tuesdays from 12:00pm – 2:00pm and Thursdays from 12:30pm - 1:30pm**, beginning on the first day of classes (1/21/2020) and running until the last day of classes (5/8/2020). On the rare occasion that regular office hours need to be cancelled or rescheduled, an announcement will be posted on Canvas. If students are **unable** to attend regular office hours (Folsom Hall, 2404B), they are welcome to email the professor to set up a separate appointment time for an *in-person* meeting or meeting via *virtual office hours*. The professor will respond to the email to confirm the appointment day and time. If the student is unable to keep the scheduled appointment time, a courtesy email is requested to cancel and/or reschedule the appointment.

#### Student Responsibilities:

- **Attendance** Classroom attendance is **mandatory**. Students are expected to arrive to class sessions on time and remain for the entire class period. Should events require an absence, it is the student's responsibility to acquire all materials and information covered during their absence from *peers*. Per university policy, children and non-registered guests are **not allowed** to attend class sessions. **Students are expected to attend the course section for which they are registered.**

- **Professionalism** Classroom participation during discussions and demonstrations should be conducted in a professional manner. At a minimum, students must maintain a level of respectful, courteous behavior expected of a professional in the field of speech-language pathology. Cell phone and electronic device use for non-academic purposes is **not permitted** during the class period.

• **Participation** Classroom participation is **mandatory**. Students are expected to actively participate in all small and large group discussions. Discussions are designed to facilitate acquisition of course content. Students will practice diagnostic and therapeutic techniques, observe and analyze audio/video patient samples, and interact with guest speakers (speaker schedule to be arranged). Classroom lectures regularly include discussion of *actual* clinical cases, thus **recording (audio or video)** of class lectures or discussions is **not permitted**.

#### **Work Habits:**

• The penalty for **late** assignments is a 1-point deduction per day. Assignments are supplied with a grading rubric. Assignments (worth 20 points each) that are submitted more than 20 days late will receive 0 points. It is the student's responsibility to **double check** their online submission of assignments. Uploads that are empty, the wrong document, or otherwise unretrievable, will receive 0 points.

• There are **no planned make-up exams** for this course. Legitimate, **documented** emergencies (e.g., medical emergency or family death) are acceptable exceptions. Exams must be made up within the time frame specified by the professor. The student is responsible for arranging (with the professor's approval of a date) a time to take the make-up exam at the CSUS Testing Center. The Testing Center charges a \$6.00 fee to proctor make-up exams. For those students **with the professor's approval** to schedule a make-up, additional information and online registration are available at:

<https://www.csus.edu/student-affairs/centers-programs/testing-center/>

Missed points for in-class attendance/participation **cannot** be made up.

TENTATIVE Course Schedule/Outline:

CSAD 127 Introduction to Medical Speech Pathology (Section 03)

Date	Topic/Class Content	Readings	Assignments/Activities	Week
1/21/20 Tues	Introduction Course Overview		<b>Please Review Course Syllabus</b> <i>course policies and procedures, exam and assignment dates, and grading</i>	1
1/23/20 Thurs	Medical Speech-Language Pathology Overview	Johnson – Chapter 1  ASHA Roles and Responsibilities <i>available online</i>		
1/28/20 Tues	Medical Speech Pathology <i>Scope of practice, health care personnel, settings, rounds, and states of illness</i>	Golper – Chapter 1 <i>available online</i>		2
1/30/20 Thurs	Brain Imaging of Communication Function: Basic Clinician Guide <i>Angiography, CT, MRI, fMRI, PET, SPECT, NIRS, EEG and MEG</i>	Johnson – Chapter 3		
2/4/20 Tues	Intro to Aphasia <i>A&amp;P, causes, types</i>	compiled aphasia reading <i>available online</i>	<b>Assignment 1</b> <b>Due 2/4/20</b> <i>Online submission by 4:30pm</i>	3
2/6/20 Thurs	Aphasia Assessment and Management	Johnson – Chapter 5		
2/11/20 Tues	Aphasia Clinical Cases and Video Samples		<b>Exam 1 Review</b>	4
2/13/20 Thurs	<b>Exam 1</b> <b>2/13/20</b>	<b>Exam 1</b> <b>Covers weeks 1 - 4</b>	<i>you will need</i> <b>Scantron 883E/ES</b>	
2/18/20 Tues	Intro to Dementia <i>A&amp;P, causes, types</i>	compiled dementia reading <i>available online</i>		5
2/20/20 Thurs	Dementia Assessment and Management	Johnson – Chapter 6		
2/25/20 Tues	Intro to Traumatic Brain Injury <i>A&amp;P, causes, types</i>	compiled TBI reading <i>available online</i>		6
2/27/20 Thurs	Traumatic Brain Injury Assessment and Management	Johnson – Chapter 7		

3/3/20 Tues	Intro to Motor Speech Disorders <i>A&amp;P, causes, types</i>	compiled motor speech reading <i>available online</i>	<b>Assignment 2</b> <b>Due 3/3/20</b> <i>Online submission by 4:30pm</i>	7
3/5/20 Thurs	Motor Speech Disorders Assessment and Management	Johnson – Chapter 9		
3/10/20 Tues	Dementia, TBI and Motor Speech Disorders Clinical Cases and Video Samples		<b><i>Exam 2 Review</i></b>	8
3/12/20 Thurs	<b>Exam 2</b> <b>3/12/20</b>	<b>Exam 2</b> <b><i>Covers weeks 5 – 8</i></b>	<i>you will need</i> <b>Scantron 883E/ES</b>	
3/17/20 Tues	Intro to Dysphagia <i>A&amp;P, causes, types</i>	compiled dysphagia reading <i>available online</i>		9
3/19/20 Thurs	<i>No In-Class Lecture</i> <i>CSHA &amp; OSLHA Conventions</i> <i>3/19 – 3/22</i>	<i>Patterson Presenting @</i> <i>OSLHA</i>	<i>Canvas</i> <i>*Online Activity*</i>	
3/24/20 Tues	Dysphagia Assessment and Management	Johnson – Chapter 10		10
3/26/20 Thurs	MBS (Videofluoroscopy) vs Fiberoptic Endoscopic Eval of Swallowing – FEES (Videoendoscopy)	Johnson – Chapter 11	<b>*In-class* Assignment 3</b> <b>Due 3/26/20</b>	
3/31/20 Tues	<i>Spring Recess – No classes</i>			11
4/2/20 Thurs	<i>Spring Recess – No classes</i>			
4/7/20 Tues	Neurogenic Voice Disorders <i>Spasmodic Dysphonia, Myasthenia Gravis and Paradoxical VF Motion</i>	Johnson – Chapter 12		12
4/9/20 Thurs	Head and Neck Cancer <i>Laryngectomy and Alaryngeal Speech (artificial larynx, esophageal speech and tracheoesophageal voice prosthesis – TEP)</i>	compiled oncology reading <i>available online</i>  Johnson – Chapter 13		
4/14/20 Tues	<b>Special Topic:</b> <b><i>Neurofibromatosis</i></b>		<b><u>Guest Speaker</u></b> <b><i>Dr. Heather Thompson</i></b>	13
4/16/20 Thurs	Dysphagia, Neurogenic Voice and Laryngectomy Clinical Cases and Video Samples		<b><i>Exam 3 Review</i></b> <b>*In-class* Assignment 4</b> <b>Due 4/16/20</b>	

4/21/20 Tues	<b>Exam 3</b> 4/21/20	<b>Exam 3</b> <i>Covers weeks 9 – 13</i>	<i>you will need</i> <b>Scantron 883E/ES</b>	14
4/23/20 Thurs	A&P: Facial, Oral and Velopharyngeal Structures	Kumer – Chapter 1 pp. 2 – 27 <i>available online</i>		
4/28/20 Tue	<b>Resonance Disorders and Velopharyngeal Dysfunction</b> <i>Assessment and Management</i>		<b>Guest Speaker</b> <i>Dr. Heather Thompson</i>	15
4/30/20 Thurs	Clefts of the Lip and Palate	Kumer – Chapter 2 pp. 39 – 63 <i>available online</i>  Johnson – Chapter 14		
5/5/20 Tues	Cleft Lip/Palate Clinical Cases and Video Samples		<b>Assignment 5</b> <b>Due 5/5/20</b> <i>Online submission by 4:30pm</i>	16
5/7/20 Thurs	Ethics in the Medical Setting	Johnson – Chapter 21	<b>Exam 4 Review</b>	
FINAL EXAM	<b>Exam 4 (Sec3)</b> <b>Thursday - 5/14/20</b> <b>3:00pm – 5:00pm</b>	<b>Exam 4</b> <i>Covers weeks</i> <b>14 – 16</b>	<i>you will need</i> <b>Scantron 883E/ES</b>	

### Course References:

Bayles, K. and Tomoeda, C. (2013). *Cognitive-communication disorders of dementia* (2<sup>nd</sup> ed.). San Diego, CA: Plural Publishing, Inc

Chapey, R. (2008). *Language intervention strategies in aphasia and related neurogenic communication disorders* (5<sup>th</sup> ed.). Philadelphia, PA: Lippincott Williams & Wilkins

Duffy, J. R. (2013). *Motor speech disorders: Substrates, differential diagnosis, and management* (3<sup>rd</sup> ed.). St. Louis, MO: Elsevier Mosby

Freed, D. (2000). *Motor speech disorders: Diagnosis and treatment*. San Diego, CA: Singular Publishing Group

Golper, L. A. C., Klaben, B. K., and Miller, C. K. (2018). *Medical speech-language pathology: A desk reference* (4<sup>th</sup> ed.). San Diego, CA: Plural Publishing

Hartley, L. L. (1995). *Cognitive-communicative abilities following brain injury: A functional approach*. San Diego, CA: Singular Publishing Group



Helm-Estabrooks, N., Albert, M. L., and Nicholas, M. (2013). *Manual of Aphasia and Aphasia Therapy* (3<sup>rd</sup> ed.). Austin, TX: PRO-ED, Inc

Hux, K. (2003). *Assisting survivors of traumatic brain injury: The role of speech-language pathologists*. Austin, TX: PRO-ED, Inc

Kummer, A. (2014). *Cleft palate and craniofacial anomalies: Effects on speech and resonance* (3<sup>rd</sup> ed.). Clifton Park, NY: Cengage Learning

Logemann, J. A. (1986). *Manual for the videofluorographic study of swallowing* (2<sup>nd</sup> ed.). San Diego, CA: College-Hill Press

Logemann, J. A. (1998). *Evaluation and treatment of swallowing disorders* (2<sup>nd</sup> ed.). Austin, TX: PRO- ED, Inc

Myers, P. S. (1999). *Right hemisphere damage: Disorders of communication and cognition*. San Diego, CA: Delmar. Singular. Publishing Group

Sohlberg, M. M. and Mateer, C. A. (2001). *Cognitive rehabilitation: An integrative neuropsychological approach*. New York, New York: The Guilford Press

## Additional Information

### Commitment to Integrity:

As a student in this course (and at this university) you are expected to maintain high degrees of professionalism, commitment to active learning and participation in this class, as well as integrity in your behavior in and out of the classroom.

### Sacramento State's Academic Honesty Policy & Procedures:

“The principles of truth and honesty are recognized as fundamental to a community of scholars and teachers. California State University, Sacramento expects that both faculty and students will honor these principles, and in so doing, will protect the integrity of academic work and student grades.” Read more about Sacramento State's Academic Honesty Policy & Procedures at the following website: <http://www.csus.edu/umannual/student/stu-0100.htm>

**Definitions:** At Sacramento State, “cheating is the act of obtaining or attempting to obtain credit for academic work through the use of any dishonest, deceptive, or fraudulent means.” **Plagiarism** is a form of cheating. At Sacramento State, “plagiarism is the use of distinctive ideas or works belonging to another person without providing adequate acknowledgement of that person's contribution.” Source: Sacramento State University Library

Note: Any form of academic dishonesty, including cheating and plagiarism, shall be reported to the Office of Student Conduct, Division of Student Affairs.

### Understand When You May Drop This Course:

It is the student's responsibility to understand when he/she need to consider disenrolling from a course. Refer to the Sacramento State Course Schedule for dates and deadlines for registration. After this period, a serious and compelling reason is required to drop from the course. Serious and compelling reasons include: (a) documented and significant change in work hours, leaving student unable to attend class, or (b) documented and severe physical/mental illness/injury to the student or student's family. Under emergency/special circumstances, students may petition for an incomplete grade. An incomplete will only be assigned if there is a compelling extenuating circumstance. All incomplete course assignments must be completed by the department's policy.

## Equal Access:

California State University, Sacramento, Department of Communication Sciences and Disorders, seeks to provide equal access to its programs, services, and activities for people with disabilities. If you have a documented disability and verification from the Office of Services to Students with Disabilities (SSWD), and wish to discuss academic accommodations, please contact your instructor as soon as possible. It is the student's responsibility to provide documentation of disability to SSWD and meet with a SSWD counselor to request special accommodation before classes start. **Sacramento State Services to Students with Disabilities (SSWD)** offers a wide range of support services and accommodations for students in order to ensure students with disabilities have equal access and opportunity to pursue their educational goals. Working collaboratively with students, faculty, staff and administrators, SSWD provides consultation and serves as the information resource on disability related issues to the campus community.

SSWD is located in Lassen Hall 1008 and can be contacted by phone at (916) 278-6955 (Voice) or (916) 278-7239 (TDD only) or via email at [sswd@csus.edu](mailto:sswd@csus.edu).

California State University (CSU) policy prohibits discrimination on the basis of age, disability (physical and mental), gender (or sex), gender identity (including transgender), gender expression, genetic information, marital status, medical condition, nationality, race or ethnicity (including color or ancestry), religion (or religious creed), sexual orientation, sex stereotype, and veteran or military status. California State University prohibits all forms of discrimination, harassment (including harassment, sexual misconduct, dating and domestic violence, and stalking) and retaliation. The University Policy Manual is available at <http://csus.edu/umannual/>.

## Basic Needs Support:

If you are experiencing challenges in the area of food and/or stable housing, help is just a click, email or phone call away! Sacramento State University offers basic needs support for students who are experiencing challenges in these areas. Please visit our Basic Needs website to learn more about your options and resources available.

<https://www.csus.edu/basicneeds/>

## Other Resources:

Testing Center: <https://www.csus.edu/testing/>

Library: <https://library.csus.edu/>

Services to Students with Disabilities: <https://www.csus.edu/sswd/>

Student Health and Counseling Services at The WELL: <https://www.csus.edu/shcs/>

Peer & Academic Resource Center: <https://www.csus.edu/parc/>

Student Academic Success and Education Equity Programs: <https://www.csus.edu/saseep/>

Case Manager, Office of Student Affairs: <https://www.csus.edu/student/casemanager/>

# Knowledge and Skills Acquisition (KASA) For Certification in Speech-Language Pathology

## CSAD 127 Introduction to Medical Speech Pathology

### Standard IV-C: Speech, Language, Hearing, Communication, and Swallowing Disorders and Differences

- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: phonology, articulation disorders (including the etiologies, characteristics, and anatomical physiological, acoustic, psychological, developmental, linguistic, and cultural correlates.)
- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: voice and resonance disorders (including the etiologies, characteristics, and anatomical physiological, acoustic, psychological, developmental, linguistic, and cultural correlates.)
- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: swallowing disorders (oral, pharyngeal, esophageal, and related functions, including oral function for feeding; orofacial myofunction,) including the etiologies, characteristics, and anatomical physiological, acoustic, psychological, developmental, linguistic, and cultural correlates.
- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: cognitive aspects of communication (e.g., attention, memory, sequencing, problem solving, and executive functioning), including the etiologies, characteristics, and anatomical physiological, acoustic, psychological, developmental, linguistic, and cultural correlates.
- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: communication modalities, including the etiologies, characteristics, and anatomical physiological, acoustic, psychological, developmental, linguistic, and cultural correlates.

### Standard IV-D: Prevention, Assessment, and Intervention

- The student will demonstrate the ability to analyze, synthesize, and evaluate knowledge re: the principles and methods of prevention, assessment, and intervention regarding articulation.
- The student will demonstrate the ability to analyze, synthesize, and evaluate knowledge re: the principles and methods of prevention, assessment, and intervention regarding voice and resonance.
- The student will demonstrate the ability to analyze, synthesize, and evaluate knowledge re: the principles and methods of prevention, assessment, and intervention regarding swallowing (oral, pharyngeal, esophageal, and related functions, including oral function for feeding; orofacial myofunction).
- The student will demonstrate the ability to analyze, synthesize, and evaluate knowledge re: the principles and methods of prevention, assessment, and intervention regarding cognitive aspects of communication (e.g., attention, memory, sequencing, problem solving, and executive functioning).
- The student will demonstrate the ability to analyze, synthesize, and evaluate knowledge re: the principles and methods of assessment and intervention regarding communication modalities.

### Standard IV-E, IV-G, IV-H: Contemporary Professional Issues

- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: standards of ethical conduct.
- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: contemporary professional issues and advocacy.

### Standard IV-F: Research

- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: processes used in research and integration of research principles into evidence-based clinical practice.

#### Standard IV-B: Basic Human Communication Processes

- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: biological bases of human communication.
- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: neurological bases of human communication.
- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: acoustic bases of human communication.
- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: psychological bases of human communication.
- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: developmental/lifespan bases of human communication.
- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: linguistic bases of human communication.
- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: cultural bases of human communication differences.

#### Standard IV-B: Swallowing Processes

- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: biological bases of human communication.
- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: neurological bases of human communication.
- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: psychological bases of human communication.
- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: developmental/lifespan bases of human communication.
- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: cultural bases of human communication differences.