

SCSD 619 (Fall 2019) Phonological Development

Contact Information

Lectures — Wednesday 11:15-12:45 — Room 869
Labs — Thursday 11:15 am- 12:45 pm — Room 862
Class instructor: Tanya S. Matthews, Ph.D. CCC, SLP
Lab instructor: Dahlia Thompson, B.A., M.Phil, Ph.D. Candidate
E-mail: tanya.matthews@mail.mcgill.ca or dahlia.thompson@mcgill.ca
Office Hours: Make appointment by e-mail.

Course Materials

Readings for course: Available on MyCourses, check weekly for download.

Textbook for class (and for winter term class): Brosseau-Lapr , F. & Rvachew, S (2020).
Introduction to Speech Sound Disorders: Plural Publishing Co.

Supplemental book for the course: Rvachew, S & Brosseau-Lapr , F (2018). Developmental
Phonological Disorders: Foundations of Clinical Practice 2nd Ed: Plural Publishing Co. This
text book is a great resource for practicing Speech Language Pathologists.

Primary Lab Resource: Shriberg, L.D., Kent, R.D., McAllister, T., & Preston, J.L. 2019. *Clinical
Phonetics with Enhanced Pearson eText – Access Card Package*, 5th Edition. Pearson Education

Speech Assessments: Kits available for loan in SCSD Test Room - see Megane Hennequin in
front office for loan system. Photocopies required for in lab use will be provided by Dahlia.

1. DEAP (US Edition) KIT: Dodd, B., Hua, Z., Crosbie, S., Holm, A., & Ozanne, A.
Diagnostic Evaluation of Articulation and Phonology. Pearson
2. GFTA III Kit: Goldman, R. and Fristoe, M. 2016. *Goldman-Fristoe Test of Articulation –
Third Edition (GFTA-3)*. Circle Pines, MN: American Guidance Service, Inc.

Good quality recording device such as (for example) Zoom H1 Handy Recorder or iPhone or
laptop equipped with appropriate software and microphone and headphones.

Course Goals

The purpose of this course is to provide students with a firm foundation for clinical decision
making when assessing and treating developmental phonological disorders. It is expected that
you will achieve each of the following essential competencies at the beginner to competent level:

- Reliably transcribe samples of speech recorded from children with delayed phonological
skills;
- Describe phonetic and phonological characteristics of speech samples at multiple levels
of the phonological hierarchy.

- Determine whether a child is meeting age appropriate expectations for speech and phonological development, given a sample of the child's speech.
- Administer and score a citation form standardized test of articulation according to manual instructions.
- Identify the primary variables that impact the course of phonological development from infancy through late childhood.
- Demonstrate increased awareness of the interrelationship of phonology and cultural diversity in facilitating the accuracy of diagnosis and enhancing the quality of treatment.

**SCSD 619 (Fall 2019) Phonological Development
Lecture and Lab Outline**

Date	Topics	
Sep. 4	Lec Topic	Course introduction: Phonology from a Developmental Perspective; Intro dynamic systems theory and multiple representations
	Reading	<i>MyCourses</i> : Syllabus <i>Introduction to SSD text</i> : pg.1-10; <i>DPD</i> : pp. 1-6
	Reflection	Class discussion of three children's progress in speech therapy.
Sept 5	Lec. Topic	Describing Articulatory Knowledge
	Reading	<i>Intro to SSD text</i> : pp. 11-20 and Read Browman & Goldsten: Articulatory Phonology: An Overview
	Practice	Identify speech sounds based on description
Sept 11	Lec Topic	Describing Phonological Knowledge (Perceptual Knowledge)
	Reading	<i>Intro. SSD Text</i> : pp.20-28; Harnad, Stevan <i>Categorical Perception & Menyuk, Paula: The role of Distinctive Features in Children's Acquisition of Phonology</i>
	Practice	Spectrogram and substitution errors
Sept.12	Lab Topic	Fundamental Concepts and Speech Assessments
	Reading	Clinical Phonetics: Chapter 1 to 3
	Practice	Applying Fundamental Concepts
Sep 18	Lec Topic	Describing Phonological Knowledge (Segmental Knowledge) & Multilinear Phonology
	Reading	<i>Intro. SSD Text</i> pp. 26-36 and Baker, Elise <i>Phonological Analysis Summary and Management Plan</i>
	Practice	In-class practice samples Bobby Sample
Sep 19	Lab Topic	Consonants and Vowels: Broad transcription
	Reading	<i>Clinical Phonetics</i> : Chapters 4 – 5; Chapter 11 (pg. 179-180)
	Practice	Transcribe English consonants and vowels in spoken utterances
Sep 25	Lec Topic	Phonological Processes
	Reading	<i>Intro. SSD Text</i> pp 36-40; Koch, Carol 114-117, Patricia Donegan: <i>Phonological Process and Phonetic Rules</i>
	Abstracts	First set of abstracts are due: Presentations
	Practice	Speech Sample GFTA or DEAP
Sep 26	Lab Topic	Diagnostic Evaluation of Articulation and Phonology (US Edition) Kit
	Homework	(1) DEAP Kit, (2) <i>Clinical Phonetics</i> : Chapters 9, 11
	Practice	DEAP Diagnostic Screen Administration (in pairs)
	Abstracts	Oral Presentations (continued)
Oct 2	Lec Topic	Speech Perception Development
	Reading	Intro SSD text pp. 41-48 & Kuhl, P.K. (2004). Early language acquisition: Cracking the speech code. <i>Nature Review: Neuroscience</i> , 5, 831-843. Brown ,Cynthia: <i>Interrelation between speech perception and phonological acquisition from Infant to Adult</i>
	Practice	Administer lake, cat, Sue, and rat SAILS module to yourself. Answer Chapter 1 study questions and bring to class for group discussion.

Oct 3	Lab Topic	Suprasegmental and Narrow Transcription: Diacritics
	Reading	<i>Clinical Phonetics</i> : Chapters 6; Chapter 7 (pg. 111 – 115); Chapter 10 (10.40, 10.47)
	Practice	Transcribe child speech samples and derive phonetic repertoire
Oct 9	Lec Topic	Development of Speech Motor Control
	Reading	<i>Intro SSD text</i> : 51-53; Kent : Review paper; Smith & Zelaznik: Speech Motor Control
	Practice	Class Discussion on both papers: Bring questions to small group discussions; If time permits, question and answer related to upcoming quiz
Oct. 10	Exam	Midterm quiz covering; Intro SSD pp. 1-39 or DPD pp. 1 to 59; lecture material; slides and any extra readings assigned

**SCSD 619 (Fall 2019) Phonological Development
Lecture and Lab Outline Continued**

Date	Topics	
Oct 16	Lec Topic	First words through 2 years
	Reading	<i>Intro SSD text</i> : pp 50-58 and Koch, Carol pp. 105-122
	Practice	Clinical application of two-year old speech sample & determine if toddler speech samples are consistent with age expectations
Oct 17	Lab Topic	Speech Sound Changes: Sound Source, Tongue Placements and Lip
	Reading	<i>Clinical Phonetics</i> : Chapter 7 (pg. 116-124 including words in isolation audio samples); Chapter 10 (10.13, 10.15, 10.18, 10.39, 10.42, 10.45)
	Practice	Transcribe child speech samples with focus on sound source, tongue placement and lip
Oct 23	Lec Topic	Segmental Norms 3 -8 years
	Reading	<i>Intro to SSD</i> : pp 57-63
	Practice	Relational analysis: which consonants are at level of customary production vs. developmental, non-developmental or atypical errors
Oct 24	Lab Topic	Speech Sound Changes: Stops and Nasals
	Reading	<i>Clinical Phonetics</i> : Chapters 8 (pg. 133-137 including words in isolation audio samples); Chapter 10 (10.20, 10.21, 10.23, 10.29)
	Practice	Transcribe child speech samples with focus on stop consonant production and nasality
Oct.30	Lec Topic	Phonological Process Norms 3-8 years
	Reading	<i>Intro to SSD</i> : pp 63-67
	Practice	Identify the phonological process from limited samples.
Oct.31	Lab Topic	Speech Sound Changes: Fricatives and Affricates
	Reading	<i>Clinical Phonetics</i> : Chapter 8 (pg. 138 -142); Chapter 10 (10.16, 10.28, 10.44)
	Practice	Transcribe child speech samples with primary focus on sibilant distortions
Nov 6	Lec Topic	Theories of Phonological Development **
	Reading	Clinical Management of Speech Sound Disorders Carol Koch pp. 82-99

	Practice	Groups assigned: Each group will explain a different model of acquisition in power point or poster session format
Nov 7	Lab Topic	Goldman Fristoe Test of Articulation (GFTA) III
	Reading	GFTA Kit (NOTE: updated GFTA-3 Manual and <i>Record Form printed post-July 18, 2016</i>)
	Practice	Administration: GFTA Sounds-in-Words (in pairs)
Nov. 13	Lec. Topic	Acquisition of Prosodic Units
	Abstracts	Second Set of Abstracts are due HERE
	Reading	<i>Intro to SSD: pp.67-75</i>
	Practice	Provide examples of phonological processes: syllable structure
Nov 14	Lec. Topic	Phonology: Cultural & Environmental Implications
	Reading	Iglesias & Goldstein Chapter 4 pp. 148-165
	Practice	Abstracts: Oral Presentations
Nov 20	Lecture	Phonology: Related Factors & Counseling
	Reading	Bernthal & Bankson: pp.172-216; Master & Apel: pp. 203-219
	Practice	Small group discussions
Nov 21	Lab Topic	Speech Sound Changes: Glides and Liquids
	Reading	<i>Clinical Phonetics</i> : Chapter 8 (pg. 142-145 including words in isolation audio samples); Chapter 10 (10.31, 10.33)
	Practice	Transcribe child speech samples with focus on glides and liquids
Nov 27	Lec. Topic	Application of phonological norms data to speech samples.
	Reading	Instructions for in-class practice activity
	Practice	Describe speech sample from multiple perspectives and rate severity.
TBA	Optional	Practice for exam**
	Reading	Instructions for practice exam
Nov 28	Lab Topic	Practice Transcription Exam
Dec 4	Lab Topic	Final Transcription Exam
Only if there is an available date and time**		
Final Exam will be scheduled during exam period		

***Discussion Groups and topics will be assigned**

Course Requirements

Requirement	Due Date	Grade Weight
Lab participation		15%
Abstracts (3) Oral Presentation		10%
Abstracts (3) Oral Presentation		10%
Midterm Examination		20%
DEAP Diagnostic Screen Administration Assignment		10%
Final transcription examination (competency exam)		Pass/fail
Final examination (cumulative; during final exam period)		35%

Please understand that you must pass the course component and the lab component independently to pass this course. The course is scored in the traditional points manner, converted to a letter grade after the final exam. The lab culminates in a final transcription examination to pass this component of the course. **If you fail the final transcription exam (less than 85% consonant transcription agreement with the instructor) you will be allowed to retake the examination 2 additional times if necessary to achieve competency. The re-take rule does not apply to any other assessment elements in this class or lab.**

SCSD 619 Phonological Development Course Requirement #1 Participation Grade (15%)

Stage of Professional Development

It is expected that the student is a proficient independent learner in the student role, at least in the context of acquiring knowledge, and competent as a team member. The student will learn to extend these competencies to the new role of developing professional and to the domain of acquiring and applying domain specific skills while supporting colleagues as is appropriate in a professional context.

Targeted Competencies

2. Role as Communicator¹	
2.1 Oral and written communication	
a	Communicate in a respectful manner.
b	Use language appropriate to the communicative situation.
c	Provide relevant information.
2.2 Documentation	
a	Maintain clear, accurate, timely and complete client records.
5. Role as Scholar¹	
5.1 Continuous learning	
a	Conduct regular assessment of personal learning needs.
c	Review new knowledge regularly and determine applicability to practice.
e	Integrate new learning into practice.
7. Role as Professional¹	
7.1 Professional integrity	
g	Maintain professional demeanour.
7.2 Professional relationships	
a	Comply with relevant federal and provincial requirements.
b	Maintain boundaries in relationships with clients, colleagues and other professionals.

Manifestation (Indicators)

1. Students will attend transcription labs and classes, properly prepared for each lab and in class practice activity.
2. Students will work collaboratively to both assess and support the learning of the team.
3. Students will honestly and promptly report the team's progress with transcription reliability.
4. Students will develop plans as a team to achieve the expected level of transcription reliability.
5. Students will comply with the rules for ethical use of patient speech samples for transcription practice.

Positive indicators: regular attendance, appropriate conflict resolution strategies, team environment that supports learning of each member, timely return of all documents.

Negative indicators: poor attendance and/or preparation, ineffective conflict resolution, competition rather than collaboration, late return of documents, illegal copying or retention of speech samples and text book materials.

SCSD 619 Phonological Development Course Requirement # Midterm Exam (20 %)

Stage of Professional Development

It is expected that the student will be proficient at reading for the purpose of acquiring and demonstrating knowledge (i.e., remembering and understanding facts and concepts). The midterm examination will assess the student's ability to progress from the knowledge stage to the skills stage (i.e., applying knowledge to the implementation of specific clinical skills and procedures) with the expectation that the student will become increasingly independent in the acquisition of skills given audiovisual and written demonstrations as well as the scientific literature as sources of information and opportunities to practice.

Targeted Competencies

1. Central Role as Speech-Language Pathologist ¹	
1.1 Foundational principles	
a	Apply basic knowledge of biomedical, cognitive, linguistic, pharmaceutical, physical and socio-behavioural sciences relevant to human communication processes, including knowledge of their acoustic, biological, cultural/linguistic, developmental and neurological bases.
b	Apply specialized knowledge of typical and atypical development, differences and <i>disorders</i> of human communication, including knowledge in each of the following areas: speech, literacy.
e	Apply knowledge of principles of clinical practice, including use of diagnostic and rehabilitation instrumentation and procedures, behavioural management, social interaction management and counselling.
f	Use problem-solving and clinical judgment in all aspects of practice.

Manifestation (Indicators)

Midterm examination

Note: *The midterm exam will be taken during the one hour laboratory period on October 10, 2019. The questions will be similar to those presented for group practice in class. Test questions will cover skills related to the description of speech samples using multiple units of analysis and multiple levels of representation using a short-answer and/or multiple choice format.*

**SCSD 619 Phonological Development Course Requirement #
DEAP Diagnostic Screen (10%)**

Stage of Professional Development

It is expected that the student is a novice in the skill of administering assessments to children. This is the first formal requirement for the student to assess a child in the program and therefore the child should be developing normally in all respects (e.g., in the speech, language, motor, social-pragmatic and behavioural domains). The test to be administered is the most basic form of citation form articulation test, usually requiring only 10 minutes of administration time. Administration and scoring procedures will be demonstrated during the lab and then practiced in a simulation lab prior to the field assessment. Given the novice status of the student, up to half an hour may be allowed for administration if required.

Targeted Competencies

1. Central Role as Speech-Language Pathologist¹	
1.1 Foundational principles	
e	Apply knowledge of principles of clinical practice, including use of diagnostic and rehabilitation instrumentation and procedures, behavioural management, social interaction management and counselling.
f	Use problem-solving and clinical judgment in all aspects of practice.
1.2 Client-centredness	
a	Respect <i>client</i> and client diversity.
1.3 Assessment	
c	Conduct assessments (one standardised articulation test).
1.8 Limits to practice	
a	Practice within personal limitations and level of expertise.
b	Consult with others as and when required.
2. Role as Communicator¹	
2.1 Oral and written communication	
a	Communicate in a respectful manner.
b	Use language appropriate to the communicative situation.
c	Provide relevant information.
2.2 Documentation	
a	Maintain clear, accurate, timely and complete client records.
7. Role as Professional¹	
7.1 Professional integrity	
g	Maintain professional demeanour.
7.2 Professional relationships	
a	Comply with relevant federal and provincial requirements.
b	Maintain boundaries in relationships with clients, colleagues and other professionals.

Manifestation (Indicators)

1. Students will identify child, obtain permissions, and negotiate appropriate location and time for assessment with the child's family, according to Sophie Vaillancourt's instructions
2. Students (working in pairs) will administer the GFTA (Sounds-in-Words subtest only) to the child, taking no longer than 30 minutes, according to manual instructions.
3. Students will submit completed test protocol within 2 weeks of assessment date. Form must be completed fully with appropriate phonetic transcription, SODA scoring conventions, accurate age calculation and accurate Sounds-in-Words Score Summary.
4. Students will comport themselves professionally throughout the experience.
5. Students will describe their experience on the discussion board.

**SCSD 619 Phonological Development Course Requirement #
Abstracts and Oral Presentation (20%)**

Stages of Professional Development

It is expected that the student will become proficient at reading for the purpose of acquiring, interpreting, and communicating knowledge across multiple domains of phonological development. Three distinct research papers based on varying topic within the domain of phonological development will be chosen by the student at two different intervals during the semester. The student (s) will read and write an abstract for each research paper. The students are expected to provide (2) short oral presentation outlining the relevant information of one research article. Please see or email me for approval of the research article for the presentation.

1. Central Role as Speech-Language Pathologist¹	
1.1 Foundational principles	
a	Apply basic knowledge of biomedical, cognitive, linguistic, pharmaceutical, physical and socio-behavioural sciences relevant to human communication processes, including knowledge of their acoustic, biological, cultural/linguistic, developmental and neurological bases.
b	Apply specialized knowledge of typical and atypical development, differences and <i>disorders</i> of human communication, including knowledge in each of the following areas: speech, literacy.
2. Role as Communicator¹	
2.1 Oral and written communication	
a	Communicate in a respectful manner.
b	Use language appropriate to the communicative situation.
c	Provide relevant information.
7. Role as Professional¹	
7.1 Professional integrity	
g	Maintain professional demeanour.

1. **Topic 1:** Phonological Acquisition, Speech Production, Speech Perception & Speech Production relationship; Speech Perception, Articulatory Knowledge, Perceptual Knowledge, Phonological Processes, Phonological Awareness, Speech Perception Development Infants & Children, Environmental Implications and Phonology
2. **Topic 2:** Stages of Infant Development; Theories of Speech Motor Control; Normal Phonological Development; Abnormal Phonological Development; Environmental Influences on Phonological Development, Physiological Constraints on Phonological Development, Phonology & Cultural implications, Bilingualism and Phonology
3. **Abstract Set 1:** 7-9 minute presentation- Six groups of 4 individuals and one group of 5 individuals will be randomly assigned.
4. **Abstract Set 2:** 8-10 minute presentation- Seven groups of 3 individuals and 2 groups of 4 individuals

Manifestation (Indicators)

1. Student(s) will identify a research paper that is based on one of the topics above.
2. Student(s) will read and report pertinent information as outlined in the abstract format.
3. Students will provide a group presentation on 1 of 3 papers. It is expected that a separate write-up for the presented paper be provided from each student.

4. The students will provide a presentation discussing the outline elements of the research paper. Please provide a list of 3-5 questions at the end of the presentation for an QA session. Make sure the questions can promote interest and a class discussion about the topic.
5. Students are expected to manage their time, present the information in a professional manner and engage the audience.

Abstract
(APA format)

Shriberg, L.D., Potter, N.L., & Strand, E. A. (2011). Prevalence and phenotype of childhood apraxia of speech in youth with galactosemia. *JSLHR*, 54, 487-519, doi: 10.1044/1092-4388(2010/10-0068).

Purpose: Describe the main point (s), theme, hypothesis, or aim of the research paper. What were the authors trying to achieve? What were the questions asked?

Method: Explain and or discuss the methods used by the authors. Was it a group design? Was it a longitudinal study? Please include the statistically analysis and the reason this particular analysis was used. Go into more detail about the purpose of the study. Discuss the protocol and or assessment procedures.

Participants: Discuss the recruitment procedures. Outline the number of participants or any inclusionary and/or exclusionary protocols. Note if any participants were exclude and for what reason. The number of participants recruited.

Results: Explain the results of the study. Explain the statistics of the results as described by participant or by group. Do the findings support the author's claim? Does the research corroborate other research?

Conclusion: What does the author purport about her findings? Does their research answer their questions? Where the authors pleased with the results? Interpret the tone of the authors in relation to their results.

Clinical Implications: How does the research impact the field of speech language pathology? How is it helpful? How does it advance the field? Does the research confirm or contradict current research? At times, the study will outline the clinical implications.

FYI: The write-up should be 1-2 pages. Please include an APA formatted title page. You are allowed to make graphs or tables etc. in order to report information that is provided. For example, recreate or create a table showing the results. This is recommended. Create a table outlining the procedures for recruitment and or create a table showing the assessment tools, participants' scores etc.

**SCSD 619 Phonological Development Course Requirement #
Final Transcription Examination (pass/grade)**

Stage of Professional Development

It is expected that the student will begin the class with knowledge of the IPA but no prior experience transcribing speech from children with a speech sound disorder. During the course of the term the student will progress from the novice to the competent level with respect to the transcription of disordered child speech. The examination will require mastery (i.e., 85% agreement in transcription) but the examination content will be restricted to consonants, mostly at the single word level, requiring broad transcription at a fairly slow pace (one target consonant per minute).

Targeted Competencies

1. Central Role as Speech-Language Pathologist¹	
1.1 Foundational principles	
e	Apply knowledge of principles of clinical practice, [specifically] use of diagnostic ... instrumentation and procedures.

Manifestation (Indicators)

The student will transcribe targeted consonants from a sample of child speech, the child having a mild articulation disorder. The examination will require mastery (i.e., 85% agreement in transcription) but the examination content will be restricted to consonants, mostly at the single word level. Except for requiring diacritics to describe distortion errors, broad transcription will suffice. The exam will target one consonant per minute in 37 single words and 3 to 5 short phrases. If the student fails to achieve 85% agreement the exam may be repeated two additional times before the date for final grade submission in an effort to achieve the criterion.

**SCSD 619 Phonological Development Course Requirement #5
Final Written Examination (35%)**

Stage of Professional Development

At the end of the course when the final exam is held it is expected that the student will be competent in the application of specific clinic skills and procedures while still developing the ability to analyse contexts to select and implement those skills and procedures appropriately.

Targeted Competencies

1. Central Role as Speech-Language Pathologist¹	
1.1 Foundational principles	
a	Apply basic knowledge of biomedical, cognitive, linguistic, pharmaceutical, physical and socio-behavioural sciences relevant to human communication processes, including knowledge of their acoustic, biological, cultural/linguistic, developmental and neurological bases.
b	Apply specialized knowledge of typical and atypical development, differences and <i>disorders</i> of human communication, including knowledge in each of the following areas: speech, literacy.
c	Apply knowledge of principles of clinical practice, including use of diagnostic and rehabilitation instrumentation and procedures, behavioural management, social interaction management and counselling.
f	Use problem-solving and clinical judgment in all aspects of practice.

Manifestation (Indicators)

Student will be able to (1) describe the phonetic and phonological characteristics of speech samples at multiple levels of the phonological hierarchy; (2) apply independent and relational analyses to hypothetical and real speech data representing child speech in the age range 2 through 9 years and interpret the data to determine if the child's speech is within age expectations or not, and (3) identify the primary variables that impact the course of phonological development from infancy through late childhood.

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Phonological Development

McGill Policies

Changes to syllabus: In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.

McGill policy on academic integrity: McGill University values academic integrity. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see www.mcgill.ca/students/srr/honest/ for more information).

Right to submit written work in English or French: In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded.

Accommodations for students with disabilities: If you have a disability please contact me to arrange a time to discuss your situation. It would be helpful if you contact the Office for Students with Disabilities at 514-398-6009 before you do this.

Policy on recording devices: All students have my permission to record the class in order to ensure accurate transcription and processing of in-class material but every effort must be taken to protect the privacy of other students as well as any patients or research participants who may be presented as case studies during class lectures (no recording during breaks; transcribe lectures quickly and then delete recordings immediately after class related material has been transcribed for study purposes). Given the possibility that recording devices may be in use it is very important that students not approach me about sensitive matters during breaks (examination grades for example). Please make an appointment to see me in my office at another time).

Guidelines for use of mobile computing and communications: McGill policy states explicitly: "Mobile computing or communications devices are not permitted to be used in class without the explicit permission of the instructor." You have my permission to use these devices during regular classes. Use of these devices is encouraged in class because I do not always provide handouts, preferring to post materials on MyCourses, respecting the policies on Sustainability (<http://www.mcgill.ca/sustainability/>). Furthermore you will need these devices for in class practice activities. I expect students to use these devices to support their learning and to not disrupt the teaching or learning process through their use of mobile computing and communication devices in the class. I encourage you to inform me or the lab instructor if the use of these devices becomes distracting for you during class time. **YOU DO NOT HAVE MY PERMISSION TO USE MOBILE COMPUTING OR COMMUNICATION DEVICES DURING EXAMINATIONS OTHER THAN ANY SPECIFICALLY PROVIDED-SUCH USE IS EXPLICITLY PROHIBITED DURING THE FINAL EXAMINATION.**

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