



Physician Assistant Education Department

Master of Science in Medicine

2 units

MSM 6301 FOUNDATIONS IN PEDIATRICS

FALL 2023

Office location: Office hours: TBA	Instructor title and name: Sarah Mayer, MS, PA-C
Final Exam and OSCEs: Monday, October 21, 8:00am-5:00pm	Phone: 805 452 4350
Meeting location: Balboa Campus, Classroom 154, Clinical Skills Lab 223	Email: smayer1@pointloma.edu
Week 1 Meeting days and times: Tuesday: 1:00pm-4:00pm Wednesday: 1:00-4:00pm Thursday: 1:00pm-4:00pm Friday: 9:00am-4:00pm	Week 2 Meeting days and times: Monday: 9:00am-4:00pm Tuesday: 1:00pm-4:00pm Wednesday: 1:00pm-4:00pm Thursday: 1:0)pm-4:00pm Friday: 9:00am-12:00pm

PLNU Mission

To Teach ~ To Shape ~ To Send

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service is an expression of faith. Being of Wesleyan heritage, we strive to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

COURSE DESCRIPTION

This course covers the epidemiology, etiology, risk factors, pathogenesis, pathophysiology, complications, and differential diagnoses of commonly encountered newborn, infant, toddler, child, and adolescent

diseases and disorders through symptoms-based and systems-based approaches. Management of patients with these diseases and disorders from initial presentation through follow-up for acute, chronic, and emergent cases will be covered, as will referral when necessary, preventive medicine, and patient education. This course also covers nutrition specific to the pediatric patient, development and assessment of the well child.

COURSE GOALS

The goal of this course is to provide the appropriate basic science background essential to the understanding of the pediatric population, the congenital and acquired diseases/disorders they may encounter, and to provide the student with the skills and knowledge necessary for the diagnosis and management of pediatric and adolescent health disorders.

PROGRAM LEARNING OUTCOMES

The content in this course will contribute to the student's proficiency in this/these area(s):

1. Gather a history and perform a physical examination. (MK, IC, PC, PR)
2. Prioritize a differential diagnosis following a clinical encounter. (MK, PC, PB, PR, SB)
3. Recommend and interpret common diagnostic and screening tests. (MK, IC, PC, PR, PB, SB)
4. Enter and discuss orders and prescriptions. (MK, IC, PC, PR, PB, SB)
5. Document a clinical encounter in the patient record. (MK, IC, PC, PR)
6. Provide an oral presentation of a clinical encounter. (MK, IC, PC, PB, PR)
7. Form clinical questions and retrieve evidence to advance patient care. (MK, PC, PR, PB, SB)
8. Give or receive a patient handover to transition care responsibility. (MK, PC, PR, IC, PB)
9. Collaborate as a member of an inter-professional team. (MK, IC, PC, PR, PB, SB)
10. Recognize a patient requiring urgent or emergent care and initiate evaluation and management. (MK, IC, PC, PR, PB, SB)
11. Obtain informed consent for tests and/or procedures. (MK, IC, PC, PR, PB)
12. Perform general procedures of a physician assistant. (MK, IC, PC, PR, PB, SB)

Initials indicate PA core competency required to meet the PLO.

PA Core Competencies:

MK = Medical Knowledge

IC = Interpersonal Skills & Communication

PC = Patient Care

PR = Professionalism

PB = Practice-based Learning

SB = Systems-based Practice

COURSE LEARNING OUTCOMES

Successful completion of this course requires demonstration of the skills and knowledge outlined here at, minimally, the ADVANCED BEGINNER level.

1. Obtain a history and perform an age specific focused physical examination relevant to pediatric disease/disorder symptoms. (PC2; MK1; IC1; IC7; PR1; PR3; PR5)
2. Prioritize a differential diagnosis based on the history and physical findings in a patient with a pediatric complaint. (PC2, PC4, MK2, MK3, MK4, PB1, IC2, PR8)

3. Recommend common diagnostic and screening tests, pharmacotherapeutics, and management based on their applicability to the differential diagnosis. (PC4, PC5, PC7, PC9, MK1, MK4, PB9, SB3)
4. Document a clinical encounter including history, physical examination, lab and/or imaging results and a differential diagnoses in the patient record. ((PC4, PC6, IC1, IC2, IC5, PR4, SB1)
5. Provide an oral presentation of a clinical encounter for a pediatric complaint including discussion of the pathology, laboratory and/or imaging results and justification of the proposed management plan. (PC2; PC6; IC1; IC2; PB1; PR1; PR3)
6. Form clinical questions and retrieve evidence to advance patient care. (PC5, PC7, MK3, MK4, PB1, PB3, PB6, PB7, PB8, PB9)
7. Recognize a pediatric patient requiring urgent or emergent care for a condition, and initiate evaluation and management. (PC1, PC2, PC3, PC4, PC5, PC6, IC6, PR1, PR5)

INSTRUCTIONAL OBJECTIVES

Upon completion of the **ANATOMY AND PHYSIOLOGY** section of the course, the student will be able to:

1. Describe normal pediatric growth, variants of normal growth, and development in healthy children. Knowledge, B2.02a, B2.02b
2. Categorize the four developmental domains of childhood. Analysis, B2.02a, B2.02b, B2.11c
3. Apply physiologic principles to applicable age related changes in pediatric patients. Application, B2.02b

Upon completion of the **PATHOPHYSIOLOGY** section of the course, the student will be able to:

4. Differentiate fetal and neonatal circulation and identify the common pathologic structural conditions that can affect the newborn. Comprehension, B2.02c
5. Discuss failure to thrive in a pediatric patient, including growth and developmental measures. Comprehension, B2.02c
6. Determine common medical and metabolic disorders detected through newborn screening tests. Evaluation, B2.02c
7. Relate the role of genetics in common pediatric disorders including cancer, cleft lip and palate, congenital heart diseases, diabetes, IBS and pyloric stenosis. Application, B2.02c
8. Explain common disturbances that affect normal pediatric growth and development. Comprehension, B2.02c, B2.11c
9. Determine how gestational age affects risks of morbidity and mortality during the newborn stage of life. Analysis, B2.02c

Upon completion of the **PHYSICAL DIAGNOSIS** section of this course, the student will be able to:

10. Collect an appropriate pediatric medical history, gathering pertinent historical information associated with medical conditions common in this population. Application, B2.07a
11. Demonstrate proper physical examination techniques in the newborn, infant, toddler, child, and adolescent. Application, B2.07b

12. Recognize and correctly interpret common signs and symptoms and physical examination findings associated with selected medical conditions. Application, B2.07c
13. Perform a targeted, appropriate physical examination directed to selected medical conditions. Application, B2.07b
14. Conduct a comprehensive newborn examination and properly calculate Apgar scores. Application, B2.07b, B2.07d

Upon completion of the **CLINICAL MEDICINE** section of this course, the student will be able to: B2.03

15. Identify risk factors for development of selected medical conditions in the pediatric population and provide options for prevention. Knowledge, B2.08b
16. Explain the risks and benefits of immunization as a function of patient/parent education. Comprehension, B2.07f
17. Utilize the immunization schedules and recommendations for infants, children, adults and foreign travelers in the prevention of illness and disease. Application, B2.08b
18. Correlate the significance of the history and physical findings they relate to the differential diagnosis and eventual working diagnosis. Application, B2.07c
19. Interpret laboratory and other diagnostic studies using normal diagnostic ranges and recognize abnormal values, distinguishing those that are pertinent to the clinical picture from those that are spurious. Application, B2.07d
20. Classify and interpret x-rays with various types of pediatric bone fractures. Evaluation, B2.07d
21. Given a sick child: interview and elicit a comprehensive, relevant medical history, B2.07a perform a complete and focused physical examination and identify the physical findings, B2.07b generate a complete list of differential diagnoses prioritizing them appropriately, B2.07c recommend an appropriate work-up, order and interpret diagnostic studies, B2.07d propose patient management including acute and chronic care plans, B2.07e provide patient education and referral. B2.07f, Evaluation
22. Given a pediatric patient with fever: interview and elicit a comprehensive, relevant medical history, B2.07a perform a complete and focused physical examination and identify the physical findings, B2.07b generate a complete list of differential diagnoses prioritizing them appropriately, B2.07c recommend an appropriate work-up, order and interpret diagnostic studies, B2.07d propose patient management including acute and chronic care plans, B2.07e provide patient education and referral. B2.07f, Evaluation
23. Given a pediatric patient with any of the following cardiovascular diseases and/or disorders: interview and elicit a comprehensive, relevant medical history, B2.07a perform a complete and focused physical examination and identify the physical findings, B2.07b generate a complete list of differential diagnoses prioritizing them appropriately, B2.07c recommend an appropriate work-up, order and interpret diagnostic studies, B2.07d propose patient management including acute and chronic care plans, B2.07e provide patient education and referral. B2.07f, Evaluation
 - a. Acute rheumatic fever
 - b. Hypertrophic cardiomyopathy
 - c. [Kawasaki disease](#)
 - d. Syncope

24. Given an infant presenting with any of the following signs and symptoms suggestive of congenital heart disease: interview and elicit a comprehensive, relevant medical history,^{B2.07a} perform a complete and focused physical examination and identify the physical findings,^{B2.07b} generate a complete list of differential diagnoses prioritizing them appropriately,^{B2.07c} recommend an appropriate work-up, order and interpret diagnostic studies,^{B2.07d} propose patient management including acute and chronic care plans,^{B2.07e} provide patient education and referral.^{B2.07f, Evaluation}

- e. [Atrial septal defect](#)
- f. Coarctation of aorta
- g. [Patent ductus arteriosus](#)
- h. [Tetralogy of Fallot](#)
- i. [Ventricular septal defect](#)

25. Given a pediatric patient with any of the following respiratory diseases and/or disorders: interview and elicit a comprehensive, relevant medical history,^{B2.07a} perform a complete and focused physical examination and identify the physical findings,^{B2.07b} generate a complete list of differential diagnoses prioritizing them appropriately,^{B2.07c} recommend an appropriate work-up, order and interpret diagnostic studies,^{B2.07d} propose patient management including acute and chronic care plans,^{B2.07e} provide patient education and referral.^{B2.07f, Evaluation}

- j. [Acute bronchiolitis](#)
- k. [Croup](#)
- l. [Asthma](#)
- m. [Pneumonia](#)
- n. [Cystic fibrosis](#)
- o. Foreign body
- p. Hyaline membrane disease
- q. RSV

26. Given a pediatric patient with any of the following gastrointestinal diseases and/or disorders: interview and elicit a comprehensive, relevant medical history,^{B2.07a} perform a complete and focused physical examination and identify the physical findings,^{B2.07b} generate a complete list of differential diagnoses prioritizing them appropriately,^{B2.07c} recommend an appropriate work-up, order and interpret diagnostic studies,^{B2.07d} propose patient management including acute and chronic care plans,^{B2.07e} provide patient education and referral.^{B2.07f, Evaluation}

- r. Pyloric stenosis
- s. [Gastroenteritis](#)
- t. Jaundice
- u. Infectious and Non-infections Diarrhea
- v. Peritonitis
- w. Appendicitis
- x. Colic
- y. Constipation
- z. Dehydration
- aa. Duodenal atresia

- bb. Encopresis
- cc. Foreign body
- dd. Gastroesophageal reflux disease
- ee. Hepatitis
- ff. Hirschsprung disease
- gg. Inguinal hernia
- hh. Intussusception

27. Given a pediatric patient with any of the following diseases of the eyes, ears, nose and throat: interview and elicit a comprehensive, relevant medical history, ^{B2.07a} perform a complete and focused physical examination and identify the physical findings, ^{B2.07b} generate a complete list of differential diagnoses prioritizing them appropriately, ^{B2.07c} recommend an appropriate work-up, order and interpret diagnostic studies, ^{B2.07d} propose patient management including acute and chronic care plans, ^{B2.07e} provide patient education and referral. ^{B2.07f, Evaluation}

- ii. Conjunctivitis
- jj. [Orbital cellulitis](#)
- kk. Strabismus
- ll. Retinoblastoma
- mm. [Defective vision](#)
- nn. [Congenital cataracts](#)
- oo. [Retinitis pigmentosa](#)
- pp. [Otitis media](#)
- qq. [Otitis externa](#)
- rr. [Mastoiditis](#)
- ss. Serous otitis media
- tt. Hearing loss
- uu. Tympanic membrane perforation
- vv. Nasal obstruction
- ww. Acute epiglottitis
- xx. Epistaxis
- yy. [Rhinosinusitis](#)
- zz. [Acute pharyngitis](#)
- aaa. [Scarlet fever](#)
- bbb. [Tonsillitis](#)
- ccc. Acute laryngitis
- ddd. Oral candidiasis

28. Given a pediatric patient with any of the following dermatologic diseases and/or disorders: interview and elicit a comprehensive, relevant medical history, ^{B2.07a} perform a complete and focused physical examination and identify the physical findings, ^{B2.07b} generate a complete list of differential diagnoses prioritizing them appropriately, ^{B2.07c} recommend an appropriate work-up, order and interpret diagnostic studies, ^{B2.07d} propose patient management including acute and chronic care plans, ^{B2.07e} provide patient education and referral. ^{B2.07f, Evaluation}

- eee. Acne vulgaris

fff. Androgenetic alopecia
ggg. Atopic dermatitis
hhh. Burns
iii. Contact dermatitis
jjj. Dermatitis (diaper, perioral)
kkk. Drug eruptions
lll. Erythema multiforme
mmm. Exanthems
nnn. Impetigo
ooo. Lice
ppp. Lichen planus
qqq. Pityriasis rosea
rrr. Scabies
sss. Stevens-Johnson syndrome
ttt. Tinea
uuu. Toxic epidermal necrolysis
vvv. Urticaria
www. Verrucae

29. Given a child presenting with the clinical presentations of child abuse and/or neglect, develop a differential diagnosis, and an intervention plan to protect the child from further potential harm. Application, B2.07c, B2.11g

30. Illustrate an appropriate patient education plan to inform new parents on prevention of communicable diseases with their child. Application, B2.07f, B2.08b

31. Utilize common pediatric and adolescent screening tools, record findings in the clinical chart, analyze the results and develop an intervention as indicated. Analysis, B2.07b, B2.07d

32. Provide anticipatory guidance to parents and caretakers as a guide to the child's development and to prevent injury and illness. Application, B2.08b

33. Summarize common challenges seen in adolescence, including eating disorders and substance abuse and iterate currently recommended approaches to these disorders. Comprehension, B2.11c, B2.11f, B2.12b

34. Discuss common disorders presenting in pediatric patients, their varying presentations and propose a management plan including consideration of co-morbidities and polypharmacy. Application, B2.02d, B2.07e, B2.08a

35. Working with the appropriate health care professional, develop an appropriate patient education plan as needed. Application, B2.07f

36. Working with the appropriate health care professional, recommend an appropriate patient referral plan as needed. Application, B2.07f

37. Working with the appropriate health care professional recommend a suitable rehabilitation plan as needed. Application, B2.08b

38. Working with the appropriate health care professional recommend a suitable prevention program as needed. Application, B2.08b

39. Working with the appropriate health care professional, recommend an appropriate palliative care plan for a patient facing end-of-life decisions. Application, B2.08e
40. Differentiate the evaluation and treatment of acute, chronic and emergent conditions affecting pediatric and adolescent health. Analysis, B2.07e, B2.08b
41. Identify the pediatric patient requiring emergent intervention, including [infant respiratory distress](#), [asthma](#), [croup](#), and [foreign body aspiration](#). Evaluation, B2.08b
42. Demonstrate skills in problem solving and medical decision-making through community learning group case discussions and activities. Application, B2.05
43. Demonstrate supportive counseling skills when delivering bad news to a patient. Application, B2.12c

SKILLS OBJECTIVES

Upon completion of this course, the student will demonstrate proficiency in:

1. Eliciting a history. Application, B2.07a
2. Performing complete and age specific focused physical exam on a pediatric patient. Application, B2.07b
3. Performing a rectal temperature on a newborn, infant, toddler, and/or child, and explaining the indications and contraindications of the procedure. Application, B2.09

Note: Superscripts identify the Bloom's Taxonomy level for each objective.

UNIT INSTRUCTION

UNIT	Hours	LECTURES	LABS
Unit I	2	ORIENTATION ANATOMY AND PHYSIOLOGY PATHOPHYSIOLOGY	
	2	PHYSICAL DIAGNOSIS	Patient History Physical Exam
Unit II	13	CLINICAL MEDICINE	Patient History Physical Exam
Unit III	13	CLINICAL MEDICINE	Patient History Physical Exam
FINAL EXAM			

REQUIRED TEXTS AND RECOMMENDED STUDY RESOURCES

Note: Texts prefaced with double asterisks are provided in Access Medicine.

****Pathophysiology of Disease: An Introduction to Clinical Medicine 8E**
By Gary D. Hammer, Stephen J. McPhee
McGraw-Hill/Lange

ISBN: 978-1260026504

Bates' Guide to Physical Examination and History Taking, 13th Edition by Lynn S. Bickley. LLW, (2022)

ISBN-13: 978-1496398178

ISBN-10: 1496398173

**Current Diagnosis and Treatment Pediatrics, 25th edition, (2020)

Author: Hay et al.

Publisher: Lange

ISBN 978-1260457827

ISSN 0093-8556

**Tintinalli's Emergency Medicine: A Comprehensive Study Guide, Ninth Edition (Emergency Medicine (Tintinalli)) 9th Edition

by Judith Tintinalli (Author), J. Stapczynski (Author), O. John Ma (Author), David Cline (Author), Rita Cydulka (Author), Garth Meckler (Author)

ISBN-13: 978-1260019933

ISBN-10: 0071484809

Essential Clinical Procedures: 4th Edition by Richard Dehn & David P. Asprey.

(2021) Elsevier Health Sciences

(ISBN-13: 978-0323624671

ISBN-10: 1455707813

Recommended but optional: (not available in Access Medicine)

Nelson Essentials of Pediatrics: With STUDENT CONSULT Online Access, 8e

by Karen Marcdante MD, Robert M. Kliegman MD.

Elsevier;

ISBN-10: 1455759805

ISBN-13: 978-0323511452

Cecil Essentials of Medicine: Edition 10

Edward J Wing, Fred J. Schiffman

Elsevier Health Sciences, (2022)

ISBN-13: 978-0323722711

ISBN-10: 143771899X

Textbook of Physical Diagnosis: History and Examination With STUDENT CONSULT Online Access, 8e (Textbook of Physical Diagnosis (Swartz)) 8th Edition by Mark H. Swartz MD FACP (Author).

Saunders; 8th edition, (2021)

ISBN-13: 978-0323672924

ISBN-10: 0323221483

LEARNING MODALITIES

Modalities include lectures, on-line pre-lecture activities, reading assignments, community learning activities, and clinical skills labs. The class schedule and assignments can be found in Canvas.

ATTENDANCE AND PARTICIPATION POLICY

Regular and punctual attendance at all classes is considered essential to optimum academic achievement. However, we recognize that as adults you have other life responsibilities and challenges that may interfere. Ultimately you are responsible for your education and your ability to demonstrate mastery of the course and program objectives.

1. You **MUST** attend:
 1. PE and clinical skills labs appropriately dressed and with all necessary equipment
 2. examinations on the date and time for which they are schedule
 3. Community learning group
2. We expect
 4. active participation in all class activities.
 5. completion of all class preparatory assignments prior to commencement of class.
 6. respect for the class, peers and faculty.
 7. on-time arrival for all classes, laboratories, learning groups or any scheduled activities.
Routine tardiness demonstrates a lack of professionalism and will not be tolerated

INCOMPLETES AND LATE ASSIGNMENTS

All assignments are to be submitted/turned in by the beginning of the class session when they are due—including assignments posted in Canvas. Failure to meet the deadline will result in a loss of 10% each day the assignment is not turned in to the requesting faculty member. Incompletes will only be assigned under extremely unusual circumstances. Students failing an examination or practicum must complete the designated remediation (See REMEDIATION below) within the assigned time.

FINAL EXAMINATION POLICY

Successful completion of this class requires taking the final examinations (written and practical) **on their respective scheduled days**. No requests for early examinations or alternative days will be approved.

ASSESSMENT AND GRADING

Student course grades are calculated using all assessment tools utilized during the course. These include quizzes, written examinations, written assignments, practicums, and evaluation of skills.

Learning community groups will be utilized to provide case-based instruction. A clinical case will be presented to each group by the group mentor. Students are expected to utilize knowledge acquired from prior readings and lectures, as well as self/group directed learning to work up the case, develop a

working diagnosis, a differential diagnosis and a therapeutic regimen which will include a follow-up plan and patient education. Effective interpersonal communication, clinical reasoning and problem solving abilities, professional behavior and teamwork are paramount to success and development as clinicians. Cases will be issued no more frequently than every other week. There will be 2 cases in this module. Students will receive a collective grade for this exercise.

Learning community group performance expectations include; demonstrating effective interpersonal communication, clinical reasoning and problem solving abilities, professional behavior and teamwork skills. Application, B2.05, B4.03b, B4.03c, B4.03e

ACTIVITY	% OF GRADE
Learning Community	5%
Case Study H&P	5%
Written Examinations	50%
Skills OSCE	15%
Patient-centered OSCE	25%

Grading will be in keeping with Point Loma Nazarene University policy for graduate programs and grading will be as follows:

A=93-100	C=73-76
A-=92-90	C-=70-72
B+=87-89	D+=67-69
B=83-86	D=63-66
B-=80-82	D-=60-62
C+=77-79	F=0-59

REMEDIATION

Remediation is the process by which both the student and the program are assured that performance indicating a deficiency in knowledge or skills is subsequently demonstrated to be satisfactory. This may include a re-test over missed material, a skills demonstration or a review of missed material with completion of corrected answers. It is important to note that this is content remediation, not grade remediation and no grade will be changed based on these activities.

Within 48 hours of the posting of a grade of <70%, the student MUST contact the course director to discuss the student's performance and create a remediation plan. Unless otherwise directed by the course director, remediation activities must be completed within 5 days.

PLNU COPYRIGHT POLICY

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

PLNU RECORDING NOTIFICATION

In order to enhance the learning experience, please be advised that this course may be recorded by the professor for educational purposes, and access to these recordings will be limited to enrolled students and authorized personnel.

Note that all recordings are subject to copyright protection. Any unauthorized distribution or publication of these recordings without written approval from the University (refer to the Dean) is strictly prohibited.

PLNU ACADEMIC HONESTY POLICY

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See the [Academic Honesty Policy](#) in the Graduate and Professional Studies Catalog for definitions of kinds of academic dishonesty and for further policy information.

Use of Artificial Intelligence (AI) tools (e.g. ChatGPT, iA Writer, Marmot, Botowski) is not permitted, and use of these tools will be treated as plagiarism.

PLNU ACADEMIC ACCOMMODATIONS POLICY

While all students are expected to meet the minimum standards for completion of this course as established by the instructor, students with disabilities may require academic adjustments, modifications or auxiliary aids/services. At Point Loma Nazarene University (PLNU), these students are requested to register with the Disability Resource Center (DRC), located in the Bond Academic Center. (DRC@pointloma.edu or 619-849-2486). The DRC's policies and procedures for assisting such students in the development of an appropriate academic adjustment plan (AP) allows PLNU to comply with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. Section 504 (a) prohibits discrimination against students with special needs and guarantees all qualified students equal access to and benefits of PLNU programs and activities. After the student files the required documentation, the DRC, in conjunction with the student, will develop an AP to meet that student's specific learning needs. The DRC will thereafter email the student's AP to all faculty who teach courses in which the student is enrolled each semester. The AP must be implemented in all such courses.

If students do not wish to avail themselves of some or all of the elements of their AP in a particular course, it is the responsibility of those students to notify their professor in that course. PLNU highly recommends that DRC students speak with their professors during the first two weeks of each semester

about the applicability of their AP in that particular course and/or if they do not desire to take advantage of some or all of the elements of their AP in that course.

This syllabus is subject to change. Students are encouraged to check course messages and emails in order to remain current.

ARC-PA standards (5th edition) addressed in this course: B2.02(a)(b)(c)(d), B2.03, B2.05, B2.07(a-f), B2.08(a)(b)(e), B2.09, B2.11(c)(f)(g), B2.12(b)(c), B4.03b, B4.03c, B4.03e