Acupuncture and Massage College
Biomedicine Board Review
Syllabus
BBR-608

Instructor: Dr. Aigars Rezevskis
Instructor will be available 15 minutes before class and 15 minutes after class to address student questions. In addition, students who need clarification on material covered in class or in assigned reading materials may request an appointment—this is not a tutoring session. Tutoring sessions may be arranged with your instructor on an individual basis. The fee arrangement is between the instructor and the student.

Hours / Credits: 60/4

Prerequisites: Successful completion of the AMC biomedicine curriculum (ANP-301, MUS-301, GBI-302, MTE-302, IPE-405, OAS-405, PA1-404, PA2-404, BLI-404, and PHA-606)

Method of Instruction: Lecture, discussion.

Required Text:

Philip Lee and Dongcheng Li (2021). Review and Pretest for NCCAOM and California Exams in Biomedicine.

NCCAOM- 2022-Candidate Preparation Handbook for Oriental Medicine (OM) Certification

Recommended Texts and Resources:

Please note: In regards to Clean Needle Technique (CNT), the Biomedicine module focuses on universal precautions and emergency situations in comparison to the Acupuncture with Point Location module which focuses on actual needling and its emergencies (e.g., needle angle and depth).

Complete Test Preparation. Multiple Choice Secrets: How to Increase your Score on any Multiple Choice Exam, Create Space Independent Publishing Platform, 2012

Anzaldua, David. An Acupuncturist's Guide to Medical Red Flags & Referrals. Boulder, CO: Blue Poppy Enterprises, Inc., 2010.

Bickley, Lynn S. Bates' Guide to Physical Examination and History Taking. 11th ed. Philadelphia: Lippincott Williams & Wilkins Publishers, 2012.

Council of Colleges of Acupuncture and Oriental Medicine. Clean Needle Technique Manual Best Practices for Acupuncture Needle Safety and Related Procedures.

7th ed. Council of Colleges of Acupuncture and Oriental Medicine, 2021. (CNT Manual)

Fischback, Frances and Marshall B. Dunning. A Manual of Laboratory and Diagnostic Tests. 9th ed. Philadelphia: Lippincott Williams & Wilkins Publishers, 2014.

Kailin, David C. Quality in Complementary and Alternative Medicine. Corvallis, OR: CMS Press, 2006.

Katzung, Bertram G., Susan B. Masters, and Anthony J. Trevor, eds. Basic and Clinical Pharmacology. 13th ed. New York: McGraw Hill Medical, 2014.

Kim, H.B. (2015). *Handbook of Oriental Medicine*, (5th ed.). H.B. Kim.

Magee, David J. Orthopedic Physical Assessment, 6th ed. St. Louis, MO: Saunders Elsevier, 2013.

Papadakis, Maxine A., Stephen J. McPhee, and Michael W. Rabow. Current Diagnosis and Medical Treatment. Columbus: McGraw-Hill Education. (Current Edition)

Porter, Robert S. (Ed.). The Merck Manual of Diagnosis and Therapy. 19th ed. West Point, PA: Merck & Co. Inc., 2011.

Pitchford, Paul. Healing With Whole Foods: Asian Traditions and Modern Nutrition. 3rd Edition. Berkeley, CA: North Atlantic Books, 2002.

TCMTESTS: https://www.tcmtests.com/

Course Description:
This course reviews the content required to take the NCCAOM Biomedicine Board Exam. It will cover THE FOLLOWING ITEMS:

- Anatomy
- Physiology
- Medical Terminology
- Pathology
- Pharmacology
- Biochemistry/Blood work/Imaging
- Introduction to Physical Exam
- Orthopedic Assessment

Course Objectives:
Upon successful completion of this course, the student will have reviewed the following content in preparation to take the NCCAOM Biomedicine Board Exam:

- Anatomy and physiology of the major organ systems
- Pathology of the major organ systems
- Pharmacology and how it relates to each major organ system
- Proper physical exam techniques for each major organ system
- Appropriate lab work and imaging studies used in the evaluation of the major organ systems

- The student will have explored the individual study methods that work best for each of them, and identified areas that require more detailed attention in their own understanding and knowledge.
- The student will have developed a plan for further study and test preparation.

The NCCAOM Bioscience Board Exam is broken down into the following domains below. For additional information on the specific content in each domain; you can also click HERE.

The NCCAOM Bioscience Board Exam is broken down into these domains:
DOMAIN I: Biomedical Model (80% of Total Exam)
DOMAIN II: Office Safety and Professional Responsibilities (20% of Total Exam)
Appendix A: Pharmaceuticals
Appendix B: Nutrients and Supplements
Appendix C: Medical Conditions

Note: **You must pass your Final Exams with 70% or higher in order to pass the class.**
Your final grade will be computed as follows:

Class Participation	30%
Quizzes	30%
Final Exam	40%
Final Grade	100%

Grading: As listed in our school catalog, the following scale will be used:

A	90-100%	4.0	P	Pass (70% or above)
B	80-89%	3.0	F	Fail (below 70% for Pass/Fail courses)
C	70-79%	2.0	I	Incomplete
D	60-69%	1.0	W	Withdrawal
			WF	Withdrawal Failure
			WNA	Withdrawal, no attendance
			RPT	Repeat course – no GPA calculated

Students MUST earn a grade of "C" or higher to pass this module (course.)

Class Policies: You are expected to attend all classes and be on time. Please see AMC **Student Handbook** for details on attendance, tardiness, missed exams, and early departure policies. Eating, drinking, and gum-chewing are not permitted. Cell phones and pagers must be turned off or put on silent mode.
Recording in Class: Students will be allowed to audio/video record lectures in this course.

Homework: Homework is an important part of learning at AMC. On a daily basis in each course as reflected in the course syllabus, reading assignments must be completed outside of class. The readings supplement the class lectures and it is your responsibility to complete all reading assignments before coming to class. Instructors use oral and written quizzes to check that students have completed the reading assignments.

Written homework assignments are turned in to the instructor in each class and count toward your course grade. Homework must be done prior to the class in which it is due.

You are responsible on quizzes and the Final Exam for all material in the reading assignments *whether covered in the class lectures or not.*

Honor Code: AMC is committed to academic integrity. Students at AMC are expected to conduct themselves in an ethical and professional manner. This means that you are expected to be honest in your academic work. Plagiarism and cheating will not be tolerated and will be dealt with as set forth in the AMC **Student Handbook**.

Appropriate Classroom Laptop Use
Acceptable in-class uses of laptops and other web-enabled devices include: taking notes, following along with the instructor on PowerPoints, working on assigned in-class activities, projects, and discussion. Unacceptable in-class uses of laptops and other web-enabled devices include: texting or e-mailing, surfing the Internet, playing games, writing papers or doing homework.

AMC Faculty consider inappropriate in-class uses of laptops and web-enabled devices equivalent to non-participation in class and reserve the right to lower student grades accordingly.

OM Attendance

Students are expected to attend all class sessions with no exceptions, due to the compressed course content and academic rigor of the program. For each class missed, there will be a **6.6-point reduction** from the class participation grade. If a student misses more than 3 class sessions, they may fail the course and be required to retake it the following year.

Americans with Disabilities Act (ADA504) Accommodations: Students requesting accommodations are asked to communicate with the Section 504 Coordinator, Yaly Flores-Soto, Academic Dean. Dean Soto may be reached at (305) 595-9500 or via e-mail at Dean@amcollege.edu. Her office is located at 10506 North Kendall Drive, Miami, FL 33176. Please refer to AMC's Student Handbook for more details on ADA Accommodation process.

CALENDAR
Course Outline For
Biomedicine Board Review

Please note that this syllabus is based on the NCCAOM Biomedicine Study Guide.

Class 1: Monday, 01/08/24
Content: Anatomy & Physiology

- Differentiate normal and abnormal structures and functions of the body systems from the conventional biomedical perspective.

Class 2: Wednesday, 01/10/24

Content: Anatomy & Physiology

- Differentiating normal and abnormal structures and functions of the body systems from the conventional biomedical perspective *continued*.

Class 3: Friday, 01/12/24

Content: Pathology, Red flags, and Referrals

- Recognize signs, symptoms, and morbidities associated with common medical conditions
- Demonstrate knowledge of medical terminology
- Patient management

No Class on Monday, 01/15/24 – Martin Luther King, Jr. Day

Class 4: Wednesday, 01/17/24

Content: Pathology, Red flags, and Referrals

Quiz #1: Quiz Topic: Anatomy & Physiology

- Recognize signs, symptoms, and morbidities associated with common medical conditions
- Demonstrate knowledge of medical terminology
- Patient management

Class 5: Friday, 01/19/24

Content: Pathology, Red flags, and Referrals

- Recognize signs, symptoms, and morbidities associated with common medical conditions *continued.*
- Demonstrate knowledge of medical terminology
- Patient management

Class 6: Monday, 01/22/24

Content: Pathology, Red flags, and Referrals

- Recognize signs, symptoms, and morbidities associated with common medical conditions.
- Demonstrate knowledge of medical terminology.
- Patient management

Class 7: Wednesday, 01/24/24

Content: Pathology, Red flags, and Referrals

- Recognize signs, symptoms, and morbidities associated with common medical conditions.
- Demonstrate knowledge of medical terminology.
- Patient management

Class 7: Friday, 01/26/24

Content: Pharmacology and Lab work

- Recognize functional classifications, mechanisms, side, and adverse effects related to commonly used pharmaceuticals (Refer to Appendix A: Pharmaceuticals on the NCCAOM Study Guide) *continued***.**

- Recognize routes of administration (e.g., intravenous, oral, subcutaneous)
- Demonstrate knowledge of the effects of the use of tobacco, alcohol, and other drugs of abuse.
- Recognize common, known pharmaceutical-supplement interactions. Nutrients and supplements
- Recognize major classifications, known actions, and potential adverse effects related to commonly used nutrients and supplements (*Refer to Appendix B: Nutrients and Supplements of the NCCAOM Study Guide*)
- Recognize signs and symptoms associated with abnormal levels of commonly used nutrients and supplements.

Class 8: Monday, 01/29/24

Content: Pharmacology and Lab work

Quiz #2: Quiz topic: pathology, red flags, and referrals

- Recognize functional classifications, mechanisms, side, and adverse effects related to commonly used pharmaceuticals (Refer to Appendix A: Pharmaceuticals on the NCCAOM Study Guide) *continued***.**
- Recognize routes of administration (e.g., intravenous, oral, subcutaneous)
- Demonstrate knowledge of the effects of the use of tobacco, alcohol, and other drugs of abuse.
- Recognize common, known pharmaceutical-supplement interactions. Nutrients and supplements
- Recognize major classifications, known actions, and potential adverse effects related to commonly used nutrients and supplements (*Refer to Appendix B: Nutrients and Supplements of the NCCAOM Study Guide*)
- Recognize signs and symptoms associated with abnormal levels of commonly used nutrients and supplements.

Class 9: Wednesday, 01/31/24

Content: Pharmacology and Lab work

- Imaging
    - Understand commonly used medical imaging studies (e.g., x-ray, MRI, CT, PET, colonoscopy, cystoscopy, bronchoscopy)
    - Recognize the significance of information gathered from imaging studies
- Laboratory tests
    - Understand commonly used medical laboratory tests** (e.g., complete blood count, basic metabolic panel, urinalysis, liver panel, cardiac panel, thyroid panel, pregnancy test, and reproductive hormones) **normal ranges will not be tested
    - Recognize the significance of information gathered from laboratory tests
- Other medical studies
    - Understand other commonly used medical studies (e.g., EMG, EKG)
    - Recognize the significance of information gathered from these studies

Class 10: Friday, 02/02/24

Content: Physical Exam and Orthopedics

- Understand clinically relevant information gathered through history taking and physical examination.
- Candidates are expected to understand all aspects of the physical examination process. They are not expected to be able to perform all aspects of the physical examination themselves.
    - Patient history* • Conduct a medical interview to obtain patient history
        - Organize information obtained during interview into appropriate sections of the patient history
        - Distinguish the relevant findings obtained during history taking *Patient History includes: chief complaint, history of present illness, allergies, past medical history, past surgical history, personal and social history, family history, current medications (prescription and non-prescription), herbs and supplements, reviewof systems.

Class 11: Monday, 02/05/24

Content: Physical Exam and Orthopedics

Quiz #3: Quiz topic: Pharmacology and Lab work

- Identify the components of the physical examination
    - Recognize how each portion of the physical examination is performed
    - Distinguish the relevant findings obtained from the physical examination
    - Interpret clinically significant information gathered during history taking and physical examination to recognize pathological conditions. (*Refer to Appendix C: Medical Conditions of the NCCAOM Study Guide*)
    - Recognize abnormalities in the function of the body systems including, but not limited to, respiratory, cardiovascular, urogenital, reproductive, nervous, integumentary, musculoskeletal, and gastrointestinal systems
    - Distinguish between relevant and non-relevant findings
    - Recognize typical presentations of commonly encountered medical conditions
    - Recognize commonly encountered ominous signs including, but not limited to, medical red flags, mental health red flags, and signs of abuse and trauma
- Clinical Decision-Making and Standard of Care (5%)
    - Analyze information to determine appropriate patient management.
    - Recognize medical conditions that may be treated without referral
    - Recognize medical conditions that require co-management
    - Recognize medical conditions that require a referral
    - Differentiate the most appropriate type of referral*** (emergent, urgent, or routine), i.e., the timeframe within which the patient should be seen
    - Recognize the conventional biomedical prognoses, management, and/or standard of care for common medical conditions (Refer to Appendix C: Medical Conditions)

***emergent (immediate) referral; urgent (24 - 48 hours) referral; routine (48 hours - 7 days) referral

Class 12: Wednesday, 02/07/23

Content: Physical Exam and Orthopedics

- Understand relevant examination techniques such as observation, auscultation, and palpation as applied to each system
- Recognize how each portion of the general systems examination is performed
- Distinguish the relevant findings obtained from the general systems examination
- Understand relevant examination techniques including, but not limited to, range of motion, muscle strength testing, deep tendon reflexes, dermatomal testing, and special tests including orthopedic tests
- Recognize how each portion of the musculoskeletal examination is performed
    - Distinguish the relevant findings obtained from the musculoskeletal examination
- Neurological examination
    - Understand relevant examination techniques including, but not limited to, assessment of cognitive function, evaluation of cranial nerves, sensory and motor function, and reflexes
    - Recognize how each portion of the neurological examination is performed
    - Distinguish the relevant findings obtained from the neurological examination

Class 14: Friday, 02/09/24

Content: BIOSCIENCE CASE STUDIES FINAL EXAM