I. **Rotation Description**
Students will gain understanding of the philosophy of Sports Medicine from a primary care perspective, apply the scientific knowledge of sports medicine in clinical practice, understand the pathophysiology and management of athletic injuries and identify the importance of the Osteopathic structural examination, OMM and Osteopathic whole person concept in the treatment of athletes.

II. **Rotation Goals**

a. Understand the integration of the physician’s role as a member of the sports medicine team along with athletic trainers, physical and occupational therapists and orthopedic surgeons

b. Understand the integration of the basic sciences and sports medicine with exercise physiology, anatomical structure and function concepts, biomechanics and principles of nutrition, fluids and electrolytes

c. Understand the role of exercise in health promotion and injury prevention

d. Conduct a pre-participation evaluation

e. Recommend exercise prescriptions with knowledge of age-related, chronic illness related and obstetrical parameters

f. Gain knowledge of community resources and their accessibility

g. Learn to assess acutely injured athletes and understand transport issues

h. Gain knowledge of special consideration for athletic subgroups: Children, women, geriatric, physically challenged, recreational and those with chronic conditions

i. Understand the following problems associated with exercise:

   i. Exercise addiction

   ii. Steroid abuse/substance abuse
iii. Intermittent exerciser
iv. Expectations of athletes
v. Eating disorders
vi. Exercise induced-anemia
vii. Specialized issues of women athletes
viii. Osteoporosis
ix. Amenorrhea
j. Perform the following techniques and procedures:
   i. Focused history of the musculoskeletal and cardiovascular system
   ii. Psychological assessment and counseling
   iii. Immobilization
   iv. Bracing
   v. Treadmill testing
   vi. Body fat determination
   vii. Flexibility determination
   viii. Safety of exercise environment
   ix. Managing the medical aspects of an athletic event
   x. Managing acutely injured athletes
   xi. Sports physiotherapy
   xii. Equipping a team physician’s bag
   xiii. Joint aspiration

III. Objectives of Rotation

A. Perform an appropriate musculoskeletal and neurologic history and physical examination, including an integrated osteopathic examination, and formulate an appropriate diagnosis and recommend treatment.
B. Utilize knowledge of diagnostics and interpretation of laboratory tests, joint fluid, and imaging modalities commonly used to diagnose musculoskeletal diseases and disorders
C. Perform an evidence-based, age-appropriate and activity-specific pre-participation physical evaluation, and provide guidance for an appropriate exercise prescription
D. Understand management indications, associated complications, and prognosis for the following musculoskeletal injuries:
   xiv. Fractures
   xv. Tendon injuries
   xvi. Ligament injuries
   xvii. Nerve entrapments
   xviii. Avascular necrosis
   xix. Chondral injuries
   xx. Meniscal injuries
   xxi. Osteoarthritis
E. Understand the diagnostic approach and treatment of musculoskeletal disorders, specifically related to bone health and development, degenerative, traumatic and overuse injuries, bone tumors, inflammatory and autoimmune disorders, and infectious etiologies
F. Understand general principles of proper rehabilitation of acute musculoskeletal and neurologic injuries to help speed recovery, maximize function, and minimize the risks of re-injury, chronic pain and chronic disability through physical therapy and athletic training experiences and assignments.

H. Utilize various osteopathic diagnostic assessments and treatment approaches in the evaluation and management of patients.
IV. **Clinical Performance Objectives**

The end-of-rotation evaluation for this rotation will be completed by your preceptor and is based on clinical core competencies. These core competencies reflect student performance in 6 key areas: communication, problem solving, clinical skills, medical knowledge, osteopathic medicine and professional and ethical considerations. Your end-of-rotation evaluation from your preceptor will be based directly on your performance in these 6 core competencies as described below.

a. Communication - the student should demonstrate the following clinical communication skills:
   1. Effective listening to patient, family, peers, and healthcare team
   2. Demonstrates compassion and respect in patient communications
   3. Effective investigation of chief complaint, medical and psychosocial history specific to the rotation
   4. Considers whole patient: social, spiritual & cultural concerns
   5. Efficiently prioritizes essential from non-essential information
   6. Assures patient understands instructions, consents & medications
   7. Presents cases in an accurate, concise, well organized manner

b. Problem Solving – the student should demonstrate the following problem solving skills:
   1. Identify important questions and separate data in organized fashion organizing positives & negatives
   2. Discern major from minor patient problems
   3. Formulate a differential while identifying the most common diagnoses
   4. Identify indications for & apply findings from the most common radiographic and diagnostic tests
   5. Identify correct management plan considering contraindications & interactions

c. Clinical Skills - the student should demonstrate the following problem solving skills:
   1. Assesses vital signs & triage patient according to degree of illness
   2. Perform good auscultory, palpatory & visual skills
   3. Perform a thorough physical exam pertinent to the rotation

d. Osteopathic Manipulative Medicine - the student should demonstrate the following skills in regards to osteopathic manipulative medicine:
   1. Apply osteopathic manipulative medicine successfully when appropriate
   2. Perform and document a thorough musculoskeletal exam
   3. Utilize palpatory skills to accurately discern physical changes that occur with various clinical disorders
   4. Apply osteopathic manipulative treatments successfully

e. Medical Knowledge – the student should demonstrate the following in regards to medical knowledge:
   1. Identify & correlate anatomy, pathology and pathophysiology related to most disease processes
   2. Demonstrate characteristics of a self-motivated learner including demonstrating interest and enthusiasm about patient cases and research of the literature
   3. Are thorough & knowledgeable in researching evidence based literature
   4. Actively seek feedback from preceptor on areas for improvement
   5. Correlate symptoms & signs with most common diseases
f. Professional and Ethical Behaviors - the student should demonstrate the following professional and ethical behaviors and skills:
1. Is dutiful, arrives on time & stays until all tasks are complete
2. Consistently follows through on patient care responsibilities
3. Accepts & readily responds to feedback, is not resistant to advice
4. Assures professionalism in relationships with patients, staff, & peers
5. Displays integrity & honesty in medical ability and documentation
6. Acknowledges errors, seeks to correct errors appropriately
7. Is well prepared for and seeks to provide high quality patient care
8. Identifies the importance to care for underserved populations in a non-judgmental & altruistic manner

g. Osteopathic Manipulative Medicine Components
Students must be familiar with the OMM didactic and workshop requirements for their OMS-4 year as described in the Osteopathic Manipulative Medicine website.

V. Conduct on Rotation
A. You are expected to conduct yourself in a professional manner at all times during this experience. You are representing VCOM and your respective institution and should do so in a positive manner.
B. A respectful approach to all staff, including physicians, athletic trainers and other allied health care professionals is assumed and demanded.
C. Respect for the patient’s rights and privacy should be observed in all patient encounters. You are privy to confidential information and that should remain private, not to be discussed outside the training room and clinic.
D. You are expected to be punctual to all clinic and coverage assignments. You will be assigned clinic coverage. You are expected to check in with the covering physician at the designated time. You are expected to remain for the entire event coverage and upon leaving check out with the covering physician.
E. Although there are rules/regulations, we expect you to have fun and enjoy the sports medicine experience!

VI. Tardiness/Absences
A. Students are expected to arrive on time to all clinical rotations. If a student is late, he or she must notify the site coordinator and the preceptor prior to or at the time they are scheduled arrive. Students must have a reason for being late such as illness or vehicle issues and it is not anticipated that this would occur more than one occasion AND it is important the student call in prior to being late. Repeated tardiness is a reason for dismissal from a rotation. Repeated tardiness will be referred to the Honor Code Council.
B. Clinical site coordinators and preceptors document attendance on the student’s rotation evaluation form. This information is reviewed by the Director of 4th Year Clinical Rotations, and the Associate Dean for Clinical Affairs.
C. The Office of Clinical Affairs requires that the medical student complete and submit an “Excused Absence Clinical Rotations Approval Form” any time they are "away" from clinical rotations. Forms are available from the Office of Clinical Affairs or from the Frequently Requested Forms web page at: http://www.vcom.edu/academics/clinicalforms.
D. Any time missed (excused or unexcused) must be remediated during the course of the rotation for credit to be issued. Typically this can be made up with extra event coverage or evening Auburn Sports Medicine clinic.
E. Students who have any unexcused absences will be referred to the Honor Code Council.
I. Event Coverage

You are expected to attend a minimum of one athletic event coverage. This will need to be coordinated by Lakiesha Young Hicks through the VCOM Sports Medicine Department (lyounghicks@auburn.vcom.edu or 231-4981).

You are expected to be on time for all clinical experiences and event coverages. Game coverages require being present two hours prior to game start time.

A good working relationship between the sports medicine staff and the athletic training staff, which includes the certified athletic trainers, graduate assistant trainers and the student trainers, is imperative. Our collective jobs and priority is to provide quality care to the athletes. It is important for the rotating resident/student to realize that they are guests in the training room/clinic and any care of the athlete must be coordinated with the team physician or fellow.

II. Didactics

It is expected that the rotating student attend the Tuesday/Thursday afternoon lectures and lab @ VCOM from 1:00(1:30) pm-5:00(5:30) pm. This is an opportunity to learn and assist in the education of OMSI and OMSII students with OMM and physical examination skills.

Additional educational experiences (all of which you are required to attend) include:

**Morning/Noon Didactics** – a calendar will be given to the rotating resident/student at the beginning of the rotation.

Free time may be spent working on your individual power point or research paper that is due on your last day of rotation, reading some of the journal files or other readings that are assigned during the rotation. We hope that the experience here will be fruitful and provide you with an exposure to primary care sports medicine. If you have any questions, please do not hesitate to ask any of the fellows or staff.
IX. Case Presentation Guidelines For Rotators

Students/Residents will create a PowerPoint presentation of a case report, and Zac will schedule a time for presentation to the attending’s and fellows.

You must complete your report and submit it to the attending completing your evaluation and Zac during the final week of your rotation for successful completion of your Sports Medicine Clinical Experience.

Papers must be formatted and include:

Cover sheet:  
Title of paper  
Name of faculty mentor  
Program affiliation (Sports Medicine, Family Medicine, etc.)  
Date  
Type of research (Case Report, etc.)

A Written Disclosure: Any potential conflicts of interest of the author or mentor (full names and all academic degrees) must be identified, signed and accompany the paper.

Abstract: The abstract is limited to 350 words.

The abstract for Case Reports must include the following sections:

1. Objective  
2. Context  
3. Case report summary  
4. Data sources and overall comparisons  
5. Conclusion

Introduction: The introduction for a Case Report must include the rationale for reporting the case and any pertinent historical information related to the case. The introduction for a Retrospective Study or Original Research must include the objective, hypothesis and how it was chosen and pertinent historical information related to the study.

Methods: The methods used to perform the study must be described for the Retrospective Study or Original Research. This information differs significantly according to the type of project reported.

If a clinical trial with at least one prospectively assigned concurrent control or comparison group, the name of the public registry in which the trial was listed must be reported. No identifying patient information that can be traced to the patient’s name can be used.

All instruments or measurements used should be listed along with methods and tools where this applies. All patient data should be unidentifiable and follow patient information protection guidelines.

The Methods section is not required for Case Reports other than to report how the literature comparison was performed (i.e. five years of literature was reviewed revealing 13 prior publications).
Report or Results: All results to the summary of the current literature reviewed should be included in the Case Report. Case reports must also include presentation, subjective and objective historical information and diagnostic findings including exam, tests and patient outcomes.

Conclusion: For Case Reports the author should interpret the significance of their case findings and the relationship of the results to the current literature, the diagnostic or treatment plan utilized the patient outcome and the prognosis.

The author should avoid reporting an exhaustive review of the literature and instead bring together the information in a summary form. Major findings, outcomes, and lessons learned should be cited here.

Acknowledgements: These should include the full names, highest academic degree awarded and title of any other institution.

References: References are required for all material derived from the work of others. References cited in text must be listed in numerical order rather than as alphabetized bibliographic entries. However, references used as general source material from which no specific information is taken should be listed in alphabetical order after the numbered references.

Journal references should include the names of all authors, the complete titles of the articles, the names of the journals, volume numbers, dates, inclusive page numbers, and, if available, direct uniform resource locators (URLs) to open access articles. Authors must provide photocopies of journal articles that are not accessible through URLs.

Book references should include the names of all authors or editors, chapter titles, book titles, names and locations of the publishers, the year(s) of publication. All authors are responsible for the accuracy and completeness of their reference citations and for the accuracy of reference attributions in text. References for quotations should include exact page numbers in both books and journal articles.

Authors must verify that all references appearing in the references section are numbered sequentially, appear in the text in that order, and are formatted according to the following examples:

X. Suggested Textbook and References
d. Garrett W: Principles & Practice of Primary Care Sports Medicine, Philadelphia, Lippincott, Williams & Wilkins, 2001
e. Karageanes S: Manual Sports Medicine, Philadelphia Lippincott, Williams & Wilkins, 2004
f. McRae R: Practical Fracture Treatment, Churchill Livingstone
g. Halpern, Herring, Atchek, Herzog: Imaging in Musculoskeletal and Sports Medicine
Required Journal Articles


XI. Course Grading/Requirements for Successful Completion of the Sports Medicine Rotation

a. Attendance according to VCOM and preceptor requirements
b. Preceptor Evaluation at end-of-rotation

Grading policies, academic progress, and graduation requirements may be found in the College Catalog and Student Handbook at: http://www.vcom.vt.edu/catalog/.