### Course Details & Information:

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Ophthalmology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Number</td>
<td>HLTH 2104</td>
</tr>
<tr>
<td>Graduating Class Year</td>
<td>DO 2017</td>
</tr>
<tr>
<td>Discipline</td>
<td>Clinical</td>
</tr>
<tr>
<td>Course URL</td>
<td><a href="https://dmu.desire2learn.com">https://dmu.desire2learn.com</a></td>
</tr>
<tr>
<td>Course Option Type</td>
<td>Required</td>
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### Course Administration & Duration:

<table>
<thead>
<tr>
<th>Department</th>
<th>Specialty Medicine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method</td>
<td>Lecture</td>
</tr>
<tr>
<td>Director</td>
<td>George Clavenna, D.O., M.P.H.</td>
</tr>
<tr>
<td>Co-Director</td>
<td></td>
</tr>
<tr>
<td>Credit Hours</td>
<td>1.0</td>
</tr>
<tr>
<td>Dates</td>
<td>3/5/15 – 3/13/15</td>
</tr>
<tr>
<td>Prerequisites</td>
<td>None</td>
</tr>
</tbody>
</table>

### Text and Required Readings:

**A. REQUIRED TEXT:**


**B. RECOMMENDED TEXT:**

### Course Description, Goals & Objectives:

**DESCRIPTION & GOALS:**
The course is designed to help the student learn about the ocular examination, and the diagnosis and management of seven common problem areas of the eye. Multiple forms of instruction will be utilized:
- Lecture
- Slides of the Eye
- Video
- Demonstration
- Textbook

**CORE OBJECTIVES:**
Upon completion of the ophthalmology system, the student will be able to discuss the indications, diagnosis and treatment for the following:

1. **Essentials of Anatomy & Physiology / The Ocular Exam**
   A. Qualities of the ideal physician – the patient/physician relationship.
   B. Understand ocular disease etiologies.
   C. Know the essentials of ocular anatomy and physiology.
   D. Measure & record visual acuity.
E. Assess pupillary reflexes.
F. Evaluate ocular motility.
G. Inspect external lid, lashes and lymph nodes.
H. Inspect conjunctiva & sclera.
I. Inspect cornea & iris.
J. Assess anterior chamber depth.
K. Assess lens clarity.
L. Ophthalmoscopy for fundus, C/D, A/V, macula and red reflex.
M. Perform tonometry if indicated.

2. Acute Visual Loss
   A. Refractive media opacities of the eye.
   B. Tear film, cornea, anterior chamber, lens, vitreous, and retina.
   C. Optic nerve disease.
   D. Optic neuritis, papilledema, optic neuropathy, giant cell arteritis, and trauma.
   E. Retinal disease.
   F. Retinal detachment, macular disease, vascular occlusions.

3. Chronic Visual Loss
   A. Recognize normal & abnormal optic nerves.
   B. Recognize glaucoma, including acute & chronic and effect on the patient.
   C. Recognize cataracts & their effect on the patient.
   D. Examine macula & recognize pathology.

4. Red Eye
   A. Perform 9 basic steps.
   B. Recognize danger signs of a red eye.
   C. Recognize the various types of conjunctivitis.
   D. Recognition and treatment of chemical burns of the eye.
   E. Describe the treatment of cases you can manage and recognize problems to refer.
   F. Describe serious complications of topical anesthetics and corticosteroids.

5. Ocular Trauma
   A. Recognize emergent/urgent conditions with proper treatment.
   B. Obtain salient historical facts.
   C. Examine the injured eye.
   D. Record visual acuity accurately.
   E. Manage or refer the common injuries.

6. Amblyopia & Strabismus
   A. Record visual acuity in children.
   B. Detect strabismus.
   C. Ophthalmoscopy to rule out organic causes of impaired vision.
   D. Counsel patients on the need for prompt treatment.

7. Neuro-Ophthalmology
   A. Measure visual acuity.
   B. Examine pupillary reactions.
   C. Test extraocular muscle.
   D. Evaluate visual field.
   E. Examine optic nerve.
8. Ocular Manifestations of Systemic Disease

Be familiar with the ocular manifestations of diabetes mellitus, hypertension, thyroid Dx, inflammatory conditions, AIDS, pregnancy and retinopathy of prematurity, malignancy, sarcoidosis, and therefore, recognize the characteristic features, especially funduscopically, and determine when referral is appropriate.

9. Drugs and the Eye

Be familiar with the delivery, diagnosis, treatment, and side effects of the more common drugs, e.g., anesthetics, mydriatics, corticosteroids, glaucoma medications, and systemic medications which may affect the eye.

Attributes & Core Competencies:

This course contributes to the following sections of the Core Competencies of the Osteopathic Student and Professional:

A. Osteopathic Philosophy and Osteopathic Principles and Practice
B. Medical Knowledge*
C. Patient Care* (via knowledge acquired from clinical lectures.)
D. Interpersonal and Communication Skills
E. Professionalism
F. Practice-based Learning and Improvement (from case presentations and clinical studies discussed in lecture).

*The asterisk denotes the competencies that are assessed during the course.

Resources:

D2L
For posted lecture material, and important announcements regarding the course, D.O. Students will refer to the "Ophthalmology Course (DO2017)" D2L site.

<table>
<thead>
<tr>
<th>Director</th>
<th>George Clavenna, D.O., M.P.H.</th>
<th>Phone</th>
<th>Please contact course assistant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office</td>
<td>Rm 815 Clinic Building</td>
<td>E-mail</td>
<td><a href="mailto:George.Clavenna@dmu.edu">George.Clavenna@dmu.edu</a></td>
</tr>
<tr>
<td>Office Hours</td>
<td>By appointment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Assistant</td>
<td>Lisa Grunzweig</td>
<td>Phone</td>
<td>515.271.7809</td>
</tr>
<tr>
<td>Office</td>
<td>Rm 1023 Clinic Building</td>
<td>E-mail</td>
<td><a href="mailto:Lisa.Grunzweig@dmu.edu">Lisa.Grunzweig@dmu.edu</a></td>
</tr>
<tr>
<td>Office Hours</td>
<td>8:30 AM – 5:00 PM</td>
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Course Policies:

Students are responsible for reading and adhering to policies stated in this syllabus, and for checking email and the D2L course site for any announcements pertaining to this course. Students are expected to contact the faculty of the course in a timely fashion if they have questions or concerns with regard to lecture materials or content.

Modification to Course Policies
The course faculty in accordance with the policies and statements in the student handbook must approve any exceptions to the policies stated in this syllabus.

LECTURES - Attendance and Format

Attendance
Attendance at all lectures is expected and strongly recommended as slide illustration instruction will comprise the major component of didactic lectures. Punctuality is expected. In addition, pop quizzes will be given at random during the lecture(s). See Grading and Make-up policies below regarding quizzes.
Lecture Format
PowerPoint Lectures will be available in PDF format only and posted on the course D2L site, usually 48 hours prior to class. Nearly all slide illustrations and some lecture content is the property of the American Academy of Ophthalmology (AAO) or other institutions. Although they are used with permission, they are subject to copyright laws and as such may not be copied, reproduced or otherwise utilized for purposes other than to study for this course. Format of lecture material posted to D2L is at the discretion of course director.

EVALUATION - Grades, Quizzes
Evaluation for the Ophthalmology Course will consist of multiple short Pop-Quizzes given at random during the course lectures and a comprehensive Final Exam given at the end of the lecture series.

Final Course Grade
A passing grade for the course will be 70% of the total possible points earned. The final course grade will be determined by the sum of the written final examination score (weighted as 95% of the grade) and the total of pop quiz scores (weighted as 5% of the grade). A letter grade will be assigned for the student’s final course grade as outlined below.

<table>
<thead>
<tr>
<th>% Score</th>
<th>Letter Grade</th>
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<tbody>
<tr>
<td>97-100</td>
<td>A+</td>
</tr>
<tr>
<td>93-96</td>
<td>A</td>
</tr>
<tr>
<td>90-92</td>
<td>A-</td>
</tr>
<tr>
<td>87-89</td>
<td>B+</td>
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<tr>
<td>83-86</td>
<td>B</td>
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<td>80-82</td>
<td>B-</td>
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<tr>
<td>77-79</td>
<td>C+</td>
</tr>
<tr>
<td>70-76</td>
<td>C</td>
</tr>
<tr>
<td>≤ 69.49</td>
<td>F</td>
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</table>

Seven pop quizzes will be given at random during course lectures. Quizzes will be given electronically through D2L. Each quiz will be worth 2 points. Five best quiz scores will count toward your grade. The lowest quiz score total(s) will be dropped. Individual questions will not be dropped. Absences for individual quizzes will result in a score of 0. Maximum points earned are 10.

EVALUATION - Final Exam Format, Protocol, Review and Make-Up

Exam Format
Exam questions will include objective multiple-choice questions, matching sets and image identification. Students will have the opportunity of taking an alternative Final Exam format consisting of short answer (fill in the blank) and short essay (compare/contrast, etc.) questions, matching sets and image identification.

The final exam will be given electronically through the D2L learning management system. Submission through this system represents the final answer. Students are strongly encouraged to also record their answers on the testing answer sheet (exam only) in case of power failure or other unexpected occurrences. The answer sheet will represent a back-up copy of the examination if required due to exceptional circumstances. All answer sheets with the student’s name and test I.D. must be returned at the end of the examination period.
Exam Protocol

Behavior of students before, during and after quizzes and examinations will be subject to the rules of professional conduct in the student Professional Integrity Code. Students sitting for examinations are expected to adhere to the established examination policies and protocols in the current student handbook.

No student may have any books, backpacks, purses, notes, or personal electronic equipment (cell phone, calculator, watches, etc.) on his/her desk or person during an examination or quiz, unless directed to do so by the course director. No student may bring and leave any of the listed items above to the testing and surrounding area. Each student is required to bring their laptop computer, power supply, and internet connection to the exam room. Software updates should be allowed to run prior to each exam and computers must be ready for the exam. The appropriate Lockdown Browser should be installed. An answer sheet will be distributed prior to the start of the exam to allow students to record their answers as a backup copy. The Specialty Medicine Department will retain the answer sheets associated with the examinations.

Lateness: Students are required to start the online examination at the required start time. Any student arriving late will be seated at the discretion of the course director. Students may not leave the test site until 15 minutes after the examination begins.

Use of Restrooms: Restroom breaks will NOT be allowed. However, if a student MUST take a break during an exam, the student will be required to close the top of their laptop, bring their answer sheet to the proctor, and complete a sign-out sheet. Upon returning to the testing room, the student must sign back in, collect the answer sheet, and resume the exam.

Questions Asked During Examinations: Proctors will not answer questions concerning content of the examination while the examination is in progress.

Writing after the Stop Announcement is Made: All examinees must stop and submit their online exam when the exam end is announced. Examinees will not be given extra time to transfer answers from the exam to the answer sheet after time is called.

Students not conforming to these regulations will be reported to the course director and may be referred to the Associate Dean for Academic Curriculum and Medical Programs.

Proctors and the course director can make accommodations to the examination protocols for extenuating circumstances that may arise before and during an examination.

Exam Review

Review of the final exam will be conducted on the day of the exam in the 10 minutes immediately following the conclusion of the exam (11:45 - 11:55 a.m.) Students who complete their exam prior to 11:45 a.m. may leave the exam room after following the exam submission protocol and turning in their answer sheet to a proctor. However, to minimize disturbance of the students still taking the examination, the doors of the room will be closed behind you. Once all students have submitted their exams, the doors will reopen at approximately 11:45 a.m. so that students who have left the room may return and all students may begin their exam review at the same time (between 11:45 - 11:55 a.m.) Please do not attempt to reenter the room if the door is still closed.

The review shall not include copying of the examination questions or any information pertaining to examination questions by any means—written or electronic. Students will not be allowed to bring their books or any electronic equipment, including cell phones, to the review. Attempting to copy questions from an examination will be considered an act of academic dishonesty.

The exam review will be an opportunity for students to ask for explanations regarding any of the exam questions. Any test question challenges must be submitted in writing during the review period on the student answer sheet or another sheet provided by the proctor(s). If further clarification is needed students may request an appointment with Dr. Clavenna directly, via email. No student is permitted to submit questions about the exam through email.
**Make-Up Policy**

**Final Exam Make-Up:**
Students who are not present for the final examination (excused or unexcused absence) will be required to take a make-up exam. The make-up exam format will consist of short answer (fill in the blank) and short essay (compare/contrast, etc.) questions, matching sets and slide identification.

Requests for make-up examinations must be submitted in writing to the course director at least two days prior to the start of the exam whenever possible. Requests for a make-up examination must include a valid reason for missing the examination (family emergency, hospitalization or other exceptional circumstance deemed as valid by the course director). Students will be asked to provide documentation of the reason for missing the examination. Final determination will be at the course director’s discretion in accordance with Student Handbook guidelines. It is the student’s responsibility to contact the course director to find whether or not his/her request has been approved.

Requests to take the final examination before the designated exam time due to circumstances other than illness or emergency must be submitted in writing to the course director prior to the start of the course to obtain approval.

All other student absences from the final exam without prior notification will be considered unexcused absences.

**Quiz Make-Up:**
Absences during a quiz will result in a score of zero for that quiz whether the absence is excused or unexcused. Make-up quizzes will not be offered. The five best total quiz scores will count toward the overall quiz total and that quizzes represent just 5% of the total grade.

**OTHER CONSIDERATIONS - Remediation, Withdrawal, Incompletes and Accommodations**

**Remediation Mechanisms**
The purpose of the remediation mechanism is to give student(s) failing a course (as opposed to withdrawal or incompletes) another opportunity to demonstrate competency and earn a passing grade. After review of the student’s academic performance in all courses, the Academic Progress Committee (APC) will determine if the student is eligible for remediation or to enter the Extended Pathways to Success Program. If the APC determines that a student is eligible for remediation, they will determine which method of remediation is appropriate.

**Assignment of Withdraw (W)**
A student withdrawing prior to completing the Final Exam will receive a W.

**Consideration of Incomplete (I)**
A student who has not completed the course but has satisfactorily completed all course requirements up to but not including the Final Exam may petition the course director for the assignment of an Incomplete.

**Accommodations**
If you have a disability and need accommodations, you must request them by contacting the Accommodations Specialist in the Center for Academic Success and Enrichment (CASE) (accommodations@dmu.edu) and submitting an application with necessary documentation. Faculty members cannot provide accommodations directly. Please note that accommodations should be submitted well in advance of the date accommodations are needed.

**Course Schedule & Room Assignments:** All lectures will be held in Ruza - LH2/LH1 overflow.

<table>
<thead>
<tr>
<th>Lecturer</th>
<th>Title</th>
<th>Keywords</th>
</tr>
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<tbody>
<tr>
<td>1. Dr. Clavenna</td>
<td>Essentials of Anatomy &amp; Physiology</td>
<td>Ocular lens, conjunctiva, sclera, comea, iris, fundus, macula, optic nerve, lid, lashes</td>
</tr>
<tr>
<td>2. Dr. Clavenna</td>
<td>The Ocular Exam</td>
<td>Visual acuity, ocular motility, pupillary reflex, red reflex, ophthalmoscopy, tonometry, anterior chamber depth</td>
</tr>
</tbody>
</table>
### HLTH*2104 - DO17
March 5-13, 2015

| 3. | Dr. Clavenna | Acute Visual Loss | Refractive media opacities, tear film, cornea, anterior chamber, lens clarity, vitreous, retina, optic neuritis, papilledema, optic neuropathy, giant cell arteritis, retinal detachment, macular disease, vascular occlusions |
| 4. | Dr. Clavenna | Chronic Visual Loss | Optic nerve, glaucoma, cataracts, macula |
| 5. | Dr. Clavenna | Red Eye I | Red eye, conjunctivitis, chemical burns, topical anesthetics, corticosteroids |
| 6. | Dr. Clavenna | Red Eye II | |
| 7. | Dr. Clavenna | Ocular Trauma | Ocular injury, emergent care |
| 8. | Dr. Clavenna | Amblyopia & Strabismus I | Amblyopia, strabismus |
| 9. | Dr. Clavenna | Neuro-Ophthalmology I | Visual acuity, pupillary reactions, extraocular muscles, visual field, optic nerve |
| 10. | Dr. Clavenna | Neuro-Ophthalmology II | |
| 11. | Dr. Clavenna | Ocular Manifestations of Systemic Disease I | Diabetes mellitus, hypertension, thyroid disease, inflammatory conditions, AIDS, retinopathy of prematurity, malignancy, sarcoidosis, fundus |
| 12. | Dr. Clavenna | Ocular Manifestations of Systemic Disease II | |
| 13. | Dr. Clavenna | Drugs & the Eye I | Anesthetics, mydriatics, corticosteroids, glaucoma medications, systemic medications |
| 14. | Dr. Clavenna | Drugs & the Eye II | |

**Notice of Changes:**
Notices of change in lecture, lecturer, exam time and/or location will be e-mailed to the class, announced in lecture when appropriate, and updated on your Outlook calendar.

**Examination Schedule:**

<table>
<thead>
<tr>
<th>EXAM</th>
<th>DATE , TIME &amp; LOCATION</th>
<th>EXAM CONTENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ophthalmology Exam</td>
<td>Friday, March 13, 2015 10:15 - 11:45 A.M. SEC Auditorium</td>
<td>Lectures 1 - 14 (All material presented in lecture, PPT/ocular slides, required textbook, and any additional material assigned.)</td>
</tr>
<tr>
<td>Exam Review</td>
<td>Friday, March 13, 2015 11:45 - 11:55 A.M. SEC Auditorium</td>
<td></td>
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</table>

**Faculty:**

George C. Clavenna, D.O., M.P.H.
Professor of Ophthalmology
College of Osteopathic Medicine