University of Utah
Department of Special Education
Ocular Disorders and Examination Techniques/Low Vision
SP ED 5430/6430 (USU SPED 6120)
Course Syllabus – Section 1
Anatomy and Physiology of the Eye
Ocular Disorders and Examination Techniques
4 Credit Hours
Fall 2017

Instructor(s): Robert M. Christiansen, M.D., F.A.C.S.

Time: Monday, 4:30 – 8:00
Initial Location: LDS Hospital Office Bldg.
324 Tenth Avenue, Suite 260
Salt Lake City, UT 84103

Office: LDS Hospital Office Bldg, Suite 260
Phone: (801) 487-8776 H; (801) 408-3937 W
Office Hours: by appointment
E-mail: rchrismd@gmail.com

Multi-University Consortium Teacher Preparation
Program in Sensory Impairments

Course Overview:
Students will demonstrate the ability to identify the important parts of the visual system, to understand and interpret eye reports, as well as translate the information into an educational plan. Participants will also conduct and supervise vision screening clinics. In addition, participants will demonstrate a basic understanding of the approaches and practices of low vision services. Low vision aids, optics, and environmental modifications are also a part of this course.

Course Content and Student Objectives:
This course is designed to provide a Teacher of Students with Visual Impairments the knowledge which they would need to accomplish the following:

1) Understand the anatomy of the human eye and the correct terms for the anatomical parts of the eye.
2) Understand the physiology of the human eye and the means by which light rays are transformed into visual images.
3) Participate in a dissection of a cow’s eye with application of the acquired knowledge of anatomy and physiology.
4) Understand how an eye examination is conducted by an ophthalmologist to assess the health of the human eye.
5) Visit an ophthalmologist’s office and personally participate in examination techniques.
6) Understand disease and pathologic processes of the human eye and how vision is affected. This will include such topics as cataracts, glaucoma, and macular and peripheral retinal problems.

7) Understand how treatment is provided for the processes mentioned above.

8) Understand hereditary diseases of the eye.

9) Be able to understand an ophthalmologist’s written visual reports and how they should be applied by a teacher of the visually challenged in teaching individual students.

(CEC Standards 1 & 4)

**Expectations for Students in the Course:**
Class attendance is expected and I expect you to read all of the assigned materials and be prepared for class. Your grade will be determined by participation in class, one quiz, one midterm examination and one final examination.

**Exams and Quizzes:**
There will be one quiz early in the course, a midterm, and a final examination. These will be open book examinations and will be reviewed in class.

**Required Texts and Materials:**

**Teaching and Learning Methods:**
The course will include lecture, discussion and hands-on learning.

**Policies:**

**Americans with Disabilities Act (ADA)**
The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to the Center for Disability Services. (www.hr.utah.edu/oeo/ada/guide/faculty/)

The Department of Special Education is committed to policies of equal opportunity and affirmative action and prohibits discrimination on the basis of race, color, national origin, religion, sex, sexual orientation, age or status as a Vietnam veteran, disabled veteran or person with a disability. The department of Special Education seeks to provide equal access to its programs, services and activities for people with disabilities. Reasonable prior notice is needed to arrange accommodations. Evidence of practice not consistent with these policies
Assignments and Grading Procedures:

<table>
<thead>
<tr>
<th>Session:</th>
<th>Date:</th>
<th>Topic:</th>
<th>Reading Assignment:</th>
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<tbody>
<tr>
<td>I.</td>
<td>08/21/17</td>
<td>Anatomy of the Eye&lt;br&gt;Eye Models and Drawings</td>
<td>1-70</td>
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<tr>
<td>II.</td>
<td>08/28/17</td>
<td>Anatomy, Physiology, Pharmacology&lt;br&gt;Cow’s Eye Dissection</td>
<td>71-128</td>
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<tr>
<td>III.</td>
<td>09/11/17</td>
<td>History Taking and Examination of Eye&lt;br&gt;Video: Microscopic Examination</td>
<td>129-162</td>
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<tr>
<td>IV.</td>
<td>09/18/17</td>
<td>Review of Anatomy &amp; Examination&lt;br&gt;Mid-term Examination –</td>
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<tr>
<td>V.</td>
<td>09/25/17</td>
<td>Ophthalmologist Office Visit&lt;br&gt;Diseases and Injuries of the Eye – 1&lt;br&gt;Pupils, Lids, Conj., Cornea, Tears.&lt;br&gt;Slides Diagnosis</td>
<td>163-254</td>
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<tr>
<td>VI.</td>
<td>10/02/17</td>
<td>Diseases and Injuries of the Eye – 2&lt;br&gt;Sclera, Orbit, Retina, Nerve, Lens&lt;br&gt;Slides Diagnosis – Quiz –&lt;br&gt;Sample Questions for Final</td>
<td>255-367</td>
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<tr>
<td>VII.</td>
<td>10/16/17</td>
<td>Diseases and Injuries of the Eye&lt;br&gt;Glaucoma, Strabismus, Heredity&lt;br&gt;Slides Diagnosis&lt;br&gt;Surgical Treatments of Eye Disease&lt;br&gt;Final Examination –</td>
<td>368-521</td>
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</tbody>
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No class on Labor Day 9/4/17 and Fall Break 10/09/17.

Assignment Points and Grading scale:
- Participation - 40 points
- Quiz - 10 points
- Midterm - 50 points
- Final Examination – 100 points

- A  100% – 93%
- A-  92.9% – 90%
- B+  89.9% – 87%
- B  86.9% – 83%
- B-  82.9% – 80%
- C+  79.9% – 77%
- C  76.9% – 73%
- C-  72.9% – 70%
- D+  69.9% – 67%
- D  66.9% – 63%
- F  62.9% – 0%

Reading Assignment indicates areas which will be covered in the class with
which students should be familiar. Specific reading assignments which students should know will be indicated in class.
Instructor(s): Pam Duda.

Time: Monday, 4:35 – 8:05
Location: SAEC 3138
Phone: 217-390-6496 (Cell)
Office Hours: by appointment
E-mail: pam.duda@utah.edu or brlandasl.duda@gmail.com

Multi-University Consortium Teacher Preparation Program in Sensory Impairments

Course Overview:
Students will demonstrate the ability to identify the important parts of the visual system, to understand and interpret eye reports, as well as translate the information into an educational plan. Participants will also conduct and supervise vision screening clinics. In addition, participants will demonstrate a basic understanding of the approaches and practices of low vision services. Low vision aids, optics, and environmental modifications are also a part of this course.

Course Content and Student Objectives:
The purpose of this course is to provide the student with a basic understanding of the major issues, approaches and practices in low vision rehabilitation services. Students will become aware of some of the functional implications and educational considerations of many of the major eye diseases and disorders. They will learn of some of the psychosocial implications of having “low vision” and of using low vision devices. They will be introduced to some functional vision assessments and vision training tools and techniques that they can use with their students. They will be familiarized with various low vision devices that may help visually impaired persons in a variety of tasks. They will also be instructed in the proper use of these devices, and their proper care and maintenance. They will be encouraged to assist their students with low vision to obtain a clinical low vision evaluation and to obtain and use appropriate low vision devices. They will be instructed regarding materials, resources, and techniques in assisting students with visual skills, with doing near vision tasks, distance vision tasks, and for using optical devices. They will explore some of the environmental modifications that can be made with materials, the workspace, and with the larger environment to benefit the low vision
Finally, they will become familiar with various resources available to persons with a vision loss, and the value of support groups.

**Student Competencies**

**Students will:**

- Identify some of the functional implications and educational considerations that often accompany many of the major eye diseases and disorders
- Identify and analyze the different eye care professionals, and their role in vision care
- Identify integral members of the interdisciplinary low vision rehabilitation team
- Identify and analyze some of the psychosocial implications of vision loss, and the use of low vision devices
- Identify some of the purposes and integral facets of a functional vision assessment and a learning media assessment, their roles in evaluating low vision students, and implications for programming, decision making, and with adaptations
- Identify some of the factors and issues in deciding between the use of large print vs. regular print books and materials, as well as other media
- Identify basic laws of optics, including the formulas for determining focal distance and dioptric power
- Identify and analyze the four types (means) of magnification
- Identify six main options for correction for near vision tasks (including reading and writing) for persons with low vision, and analyze the advantages and disadvantages of each option
- Identify the three main options for correction for distance vision tasks
- Identify and analyze various options for magnifying the print on a computer monitor
- Identify the proper techniques for using and caring for various low vision devices
- Identify various materials, activities, and resources for use in training of vision skills; for training for near vision tasks; for training for distance vision tasks; and also for training with optical devices
- Identify some of the factors that enhance visibility for persons with low vision, and recommend specific adaptations for lighting, contrast, glare reduction, and organization for various tasks for persons with major eye diseases/disorders
- Identify various non-optical aids and devices, and identify their benefits and usefulness for a variety of tasks
Identify resources, agencies, and organizations available to assist a person with low vision, as well as for teachers and service providers to persons with low vision.

**Required Texts and Materials:**


**Reference Publications:**


Obtaining Your Course Text, Reference Texts, and Journals

If you do not already have the course text, Program in Low Vision Therapy, Second Edition, 2013, you should try to obtain one immediately. It is available at www.esc4.net, or from the Region 4 Education Service Center, 7145 W. Tidwell Road, Houston, TX 77092. Phone: (713) 462-7708. The text is: ISBN-13: 978-1-937403-14-0. You may also find a used copy available online, or from a student from a previous class.

Foundations of Low Vision: Clinical and Functional Perspectives, 2nd Edition, by Anne L. Corn and Jane N. Erin, Eds. (2010), is our former course text. It is certainly not required to purchase, but is recommended reading and may be an invaluable resource. It is available from the American Foundation for the Blind (www.afb.org), and may also be available online from Amazon. This updated and revised 2nd edition is a great text for you and your district to have and refer to.

Vision and the Brain: Understanding Cerebral Visual Impairment in Children, edited by Amanda Hall Lueck and Gordon Dutton is new last year (2015), and could be the basis for an entire course in a university personnel preparation course for teachers of the visually impaired. It is perhaps the best book ever on this topic (see www.afb.org).

Nancy Levack's book, Low Vision: A Resource Guide with Adaptations for Students with Visual Impairments, 2nd Edition, is also very helpful and recommended. You are certainly not required to purchase it, however. This is available at www.tsbvi.edu, from the Texas School for the Blind, 1100 W. 45th Street, Austin, TX 78756.

Understanding Low Vision, edited by Randall Jose, is a comprehensive resource on low vision. It had previously been the course text for earlier courses in low vision in this program, and certain chapters and excerpts may continue to be referenced in this class. This text is no longer available from the American Foundation for the Blind, but can be found online at Amazon.

Current issues (and articles) of the Journal of Visual Impairment and Blindness (JVIB) are available on-line, and are a free benefit of membership in AER (the Association for Education and Rehabilitation of the Blind and Visually Impaired). Instructions for access to articles and issues are available from AER’s website: www.aerbvi.org. You can also subscribe to JVIB without a membership in AER, by contacting the American Foundation for the Blind (AFB). Archived back issues and articles from JVIB prior to 2000 may also be obtained online, in the library.
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<thead>
<tr>
<th>Date &amp; Time</th>
<th>Location</th>
<th>Topic</th>
<th>Assignments</th>
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</table>
| Monday, October 23, 2017 4:35 pm to 9:00 pm | SAEC 3138 Face to Face          | Functional Vision Assessment *and Instruction* of Children and Youth in Academic Programs  
  • The Role and Reason of a Functional Vision Assessment  
  • Various Assessment Tools  
  • Components of the Functional Vision Assessment  
  • Developing Recommendations  
  • Planning and implementing Instruction  
  • Assessing Near/Distance acuities  
  • Evaluating Visual Fields  
  • Observing Eye Movements and Coordination | Program in Low Vision Therapy, Second Edition Chapters 1-3  
  Foundations of Low Vision: Clinical and Functional Perspectives Chapter 10 |
| Tuesday, October 24, 2017 9 am to 4 pm | Sorenson Arts and Education Complex Face to Face | Learning Media Assessment  
  • What does school law say about literacy?  
  • Issues related to braille literacy  
  • Eye conditions and their educational implications  
  • Traditional vs. Functional Literacy  
  • Reading Efficiency  
  • How to prepare reading passages in a variety of media (print, large print, braille, auditory)  
  • Interpret assessment findings using "if" "then" statements  
  • Program planning for Literacy needs. | Foundations of Low Vision: Clinical and Functional Perspectives Chapter 12 |
| Monday, October 30, 2017  | SAEC 3138 Broadcasted            | What is Low Vision? What is Low Vision Rehabilitation?  
  • A Historical Perspective of Low Vision | Foundations of Low Vision: Clinical and Functional Perspectives |
<table>
<thead>
<tr>
<th>4:35 pm to 8:05 pm</th>
<th>Vision Services</th>
<th>Functional Perspectives Chapters 1-3</th>
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<tr>
<td></td>
<td>• Demographics of Persons with Low Vision</td>
<td>Program in Low Vision Therapy, Second Edition Chapter 6 &amp; 9</td>
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<td>• Vision Development in Infants and Children</td>
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<td>• Visual Screening and Screening Tools for Children</td>
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<td>• Child Find</td>
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<td>• The Use of Vision at Different Ages and in Different Activities</td>
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<td>• Special Considerations of Children with Multiple Disabilities</td>
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<td>• Special Considerations of the Elderly</td>
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<td>• Psychological and Social Implications of Having “Low Vision,” and of Using Low Vision Devices</td>
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<td>• Attitudes and Adjustment</td>
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<td>• Reactions of Others</td>
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<td>• Fear of Losing Vision</td>
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<td>• Issues of Personal Identity</td>
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<td>• &quot;Passing as Sighted&quot;</td>
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<td>• Disclosing a Visual Impairment</td>
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<td>• Understanding One's Visual Impairment</td>
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<td>• Use of Optical Devices</td>
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<td>• Low Vision and Loss of Driving or Fear of Loss of Driving</td>
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<td>• Eye Care Providers: A Review</td>
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<td>• The Low Vision Team</td>
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<td>• Various Low Vision Service Delivery Models</td>
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<td>• Standards and Certification for Service Providers</td>
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<tr>
<th>Monday, November 6, 2017 4:35 pm to 8:05 pm</th>
<th>SAEC 3138 Broadcasted</th>
<th>Review of Major Eye Diseases and Conditions Simulations of Some Major Eye Diseases Functional Vision Assessment and Instruction of Children and Youth with Multiple Disabilities</th>
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<tr>
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<td>• Special Attention to Vision Disorders of Children, and to Various Syndromes</td>
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<td>Foundations of Low Vision: Clinical and Functional Perspectives Chapter 10-11</td>
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<td>Monday, November 13</td>
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<td>Monday, November 27</td>
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</table>
### Distance and Near Visual Acuity Testing
- Contrast Sensitivity Function Testing
- Testing for Central Scotomas

### Determining Target Tasks (Chief Complaints) Refractive Errors:
- Myopia
- Hyperopia
- Astigmatism

### Types of Lenses, including:
- Spherical
- Concave
- Convex
- Aspheric
- Aplanatic
- Diffractive

### Basic Laws of Optics

### Four Types (Means) of Magnification

### Formulas for Determining Focal Length and Determining Dioptric Strength

### Low Vision Clinics, and Devices for Near Vision Tasks
- Determining Needed Levels of Magnification
- Matching Tools with Tasks—Choosing the Most Helpful Low Vision Devices for Each Target Task/Chief Complaint

### Optical Devices for Near Vision Tasks:
- Spectacles—Prism or Microscopic
- Clip-on Loupes
- Telescopic Glasses for Near
- Hand Held Magnifiers
- Stand Magnifiers
- Closed Circuit TV’s (CCTV’s) and Digital Magnifiers

### Monday, December 4, 2017
4:35 pm to 8:05 pm
SAEC 3138

### Other Aspects, and Resources

Power point presentations on psychosocial issues for individuals with low vision.

Helping with Other Types of Visual Field Loss:
- Hemianopia
- Peripheral Field Loss

Driving and Vision Loss
Transportation Dilemmas for Persons with Low Vision
Resources in the Community, State, and Nation

- Websites on Low Vision
- Journals, Books, and Brochures
- Professional Organizations and Conferences, including AER
- Government Resources, including the National Eye Institute (NEI)
- Webinars, including by Eschenbach, AER, the Hadley Institute, and others
- Listserv on Low Vision, by the Low Vision Rehabilitation Division (7) of AER
- Support Groups and Other Helps
- ACVREP

Continuing education opportunities in low vision
Low Vision Rehabilitation Services and Clinics in the Mountain West and Elsewhere
Funding Options and Assistance
Questions and Course Review

| Monday, December 11, 2017 | 4:30 pm to 8:30 pm | **Canvas** | Final Exam |
Course Requirements

1. Attendance and participation at all seven class periods is required.

1. Develop an assessment plan for either a student on your caseload or a provided student profile scenario. Assessment plan must be reflective of student’s age/grade, eye condition and vision prognosis, degree of vision loss, overall abilities/limitations, and literacy needs. The FVLMA plan must be submitted to Canvas by November 13, 2017. See assignment details on Canvas.

2. Completion of an Environmental/Material Analysis of a classroom for a student with visual impairment. The project will focus on the assessment of school materials, the immediate work space, and the school environment of a low vision student. The student will then recommend several suggested adaptations of the materials, the immediate work space, and the larger environment. A further explanation of this project accompanies this syllabus. This project must be submitted to Canvas by November 27, 2017. See assignment details on Canvas.

3. Create a power point presentation highlighting simulation of a specific eye condition while performing a daily living skills task. Presentation should be submitted to Canvas by December 4, 2017. The power points will be shared with peers on December 4, 2017. The specific eye condition and daily living task will be assigned to prevent multiple presentations on the same eye condition. See assignment details on Canvas.

5. Successful completion of final examination. The final exam will be administered on Canvas and open on December 11, 2017 between 4:30 pm to 8:30 pm. You will only have 90 minutes to take the exam.
Course Assignments

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
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<tbody>
<tr>
<td>FVLMA Assessment Plan</td>
<td>60</td>
</tr>
<tr>
<td>Complete an environmental/material analysis</td>
<td>60</td>
</tr>
<tr>
<td>Power Point presentation on Psychosocial Issues for Individuals with Low Vision</td>
<td>50</td>
</tr>
<tr>
<td>Final Exam</td>
<td>50</td>
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<tr>
<td>Total</td>
<td>220</td>
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</tbody>
</table>

Evaluation Procedures
A= 93%-100% 204-220 points  
B= 85%- 92% 187-203 points  
C= 77%- 84% 169-186 points  
D= 69%-76% 151-168 points  
F= below 68% 0-150 points  

Standards for Written Work
All papers must be typed and 12 point black print. They will be graded according to the following standards:
- Information is thorough and complete.
- Information is clearly stated and concisely written, and logically organized.
- Written work is free of spelling, grammar, and punctuation errors.
- Written work is presented in a professional manner and uses professional language.

Other Course Standards
Professional behaviors reflecting the dispositions required of teachers will be expected from you as a prospective teacher. These behaviors include promptness and consistent attendance, preparedness for class discussion, meeting due dates, manners, honesty and ethics.

Late Work: All assignments are expected to be submitted on Canvas and on time. Canvas has an open/close period in which assignments can be uploaded. Late work is frowned upon and will result in 10% off each day the assignment is late. After the 3rd late day, the assignment will no longer be accepted and grade will result in a “0”. A disposition will be written for any student that accumulates 3 late days (whether the late days result from one assignment or a combination of assignments).
Quality of Work: Points/grades are associated with assignments. The quality of every project must be at least “satisfactory” in order to pass the course. Even if the student has enough cumulative points to pass the course without a “satisfactory” grade on any given project, the student will not receive a passing grade in the course.

Absences: All students are expected to attend every class period and placement assignment. Upon an illness, students must contact the professor/cooperating teacher of their absence. Absences will not be approved due to a social event or employment engagement. Students will be expected to obtain notes from a peer and make up any work that they may miss. In-class assignments or quizzes missed for an unapproved absence will not be accepted. Two unapproved absences will result in a disposition.

Tardies: Students are expected to be professional and demonstrate strong work ethics. Arriving late (even just a few minutes) to classes or placement assignments is not acceptable. Future employers will expect all their employees to be punctual and arrive to work on time. Three documented tardies will result in a disposition.

Academic Integrity
Academic integrity is expected in all class-related endeavors. Students are expected to be honest in all academic work. Offenses involving academic dishonesty include, but are not limited, to the following: cheating on quizzes or examinations, computer dishonesty, plagiarism, grade falsification or collusion (see Student Handbook for definitions and University regulations regarding academic dishonesty). Acts involving academic dishonesty will be reported to the Department Chairperson and the Student Judicial Office. The penalties for academic dishonesty may be severe, ranging from failure on the particular class requirement, to failure in the course, to expulsion from the University in extreme cases (see Undergraduate Catalog and Student Handbook for a description of adjudication procedures).

Accommodations Statement
Department of Special Education is committed to policies of equal opportunity and affirmative action and prohibits discrimination on the basis of race, color, national origin, religion, sex, sexual orientation, age or status as a Vietnam veteran, disabled veteran, or person with a disability. The department of Special Education seeks to provide equal access to its programs, services and activities for people with disabilities. Reasonable prior notice is needed to arrange accommodations. Students should notify the instructor of needed accommodations at the beginning of the semester or in a timely fashion. Evidence of practice not consistent with these policies should be reported to the Office of Equal Opportunity and Affirmative Action, 581-8365.