**ALTERNATIVE CLASS A EDUCATION PROGRAM CHECKLIST**

**Program:** Alternative A - Physics  
**Total Hours:** 46

**Institution:** The University of Alabama in Huntsville

<table>
<thead>
<tr>
<th>Study in each of the following areas:</th>
<th>Teaching Field: At least 1/3 of the program shall be in teaching field courses.</th>
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<tbody>
<tr>
<td><strong>Curriculum:</strong></td>
<td>15 hours of graduate coursework in Physics is required</td>
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<tr>
<td>ED 604 - Contributions of Psychology to Education</td>
<td><strong>See graduate course listing or graduate catalog for courses descriptions</strong></td>
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<td>ED 609 - Classroom &amp; Behavior</td>
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<td><strong>Management</strong></td>
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<td><strong>Methods of Teaching:</strong></td>
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<td>ED 523 - Teaching Science in Middle</td>
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<td>and High Schools</td>
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<td><strong>Diverse Populations:</strong> (including special needs)</td>
<td>English Language Arts, General Science, and General Social Studies programs shall require at least one course in two areas within the broader field.</td>
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<tr>
<td>ED 530 - Applied Multiculturalism</td>
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<td><strong>Literacy:</strong> (including mathematics and technology)</td>
<td>Additional Courses:</td>
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<tr>
<td>ED 608 - Reading in the Content Areas</td>
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<td>ED 520 - Computer-based Instructional Technology</td>
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<td><strong>Professionalism:</strong></td>
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<tr>
<td>ED 501 - Introduction to Education</td>
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<td><strong>Using Assessment Data to Improve Student Learning:</strong></td>
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<td>ED 607 - Education Leader as Evaluator</td>
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<tr>
<td><strong>Survey of Special Education Coursework:</strong> (required if not previously completed)</td>
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<tr>
<td>ED 593 - Educating the Exceptional Child &amp; Youth</td>
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<td><strong>Internship:</strong></td>
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<tr>
<td>ED 698 - Middle and High School</td>
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<tr>
<td>Internship</td>
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**Dean of Education:**  
*Beth N. Quick*

**Date:** 9-17-2015
Physics - Graduate Courses

- PH 531 - Introduction to Plasma Dynamics
- PH 541 - Geometrical Optics
- PH 542 - Physical Optics
- PH 544 - Optoelectronics
- PH 546 - Radiometry, Detectors, and Sources
- PH 553 - Introduction to Particle Physics
- PH 560 - Introduction to Solid State Physics I
- PH 561 - Introduction to Solid State Physics II
- PH 570 - Optical and Photonic Systems Design
- PH 571 - Stellar Astrophysics
- PH 572 - Galaxies & Cosmology
- PH 574 - Introduction to General Relativity
- PH 579 - Observational Astrophysics
- PH 601 - Classical Dynamics I
- PH 607 - Mathematical Methods I
- PH 609 - Mathematical Methods II
- PH 615 - Introduction to Radiological Physics
- PH 616 - Physics of Radiation Therapy
- PH 621 - Statistical Mechanics and Kinetic Theory I
- PH 622 - Statistical Mechanics and Kinetic Theory II
- PH 631 - Electromagnetic Theory I
- PH 632 - Fourier Optics
- PH 636 - Introduction to Space Plasma Physics
- PH 642 - Optical Physics
- PH 645 - Lasers I
- PH 651 - Quantum Mechanics I
- PH 652 - Quantum Mechanics II
- PH 654 - Optical Testing
- PH 655 - Applied Quantum Mechanics
- PH 661 - Data Analysis and Statistical Methods for Physics and Astrophysics
- PH 662 - Computational Physics
- PH 670 - Optomechanical Design and Manufacturing
- PH 671 - Optical Fabrication and Testing
- PH 673 - High Energy Astrophysics
- PH 674 - General Relativity and Gravitation I
- PH 679 - Education Capstone Course
- PH 680 - Selected Topics
- PH 681 - Selected Topics
- PH 682 - Selected Topics
- PH 683 - Selected Topics
- PH 684 - Selected Topics
- PH 685 - Selected Topics
- PH 686 - Selected Topics
- PH 687 - Selected Topics
- PH 688 - Selected Topics
- PH 689 - Selected Topics
- PH 699 - Master's Thesis Research