Required Certification Sequence for UTeach Candidates Majoring in Materials Engineering

Program: GENERAL SCIENCE

Total Hours: *  

*This certification requires a minimum of 120-hours for a degree in materials engineering plus 21 hours of UABTeach courses.

**CLASS B EDUCATION PROGRAM CHECKLIST**

Institution: UNIVERSITY OF ALABAMA AT BIRMINGHAM

| Date Approved: | 7/18/2014 |
| Date Expires: | 9/30/2017 |
| Revisions: | |

### General Studies

Shall include courses and/or experiences in written composition, humanities, social studies, mathematics, and science.

- **EH 101** English Composition I 3
- **EH 102** English Composition II 3

**Humanities: (6-9 Hours)**

Humanities/Fine Arts (See AGSC List) 6-9

**Social Science: (6 Hours)**

*History (See AGSC List) 3

Non-History Social Science (See AGSC List) 6-9

**Science: (20 Hours)**

Natural Sciences (lab required with each course)

- **BY 1115/499** 3
- **CH 115/116 Chemistry I with Lab** 4
- **CH 117/118 Chemistry II with Lab** 4
- **PH 221 General Physics I and Lab** 4
- **PH 222 General Physics II and Lab** 4

**Astronomy: (4 Hours)**

- **AST 101/111 Astronomy of the Universe with Lab OR** 4
- **AST 102/112 Astronomy of Stellar Systems with Lab OR** 4
- **ES 101/102 Physical Geology with Lab OR** 4
- **ES 103/104 History of the Earth with Lab** 4

**Mathematics: (12 Hours)**

- **MA 125 Calculus I** 4
- **MA 126 Calculus II** 4
- **EGR 265 Math Tools for Engineers OR** 4
- **MA 227 Calculus II and MA 252 Differential Equations** 4-7

**Other: (3 Hours)**

- **PHL 275 Perspectives on Science and Mathematics** 3

### Professional Studies

These courses must be taken prior to admission to TEP.

- **EHS 125 Step 1: Inquiry Approaches to Teaching** 1
- **EHS 126 Step 2: Inquiry Approaches to Teaching** 1
- **EHS 325 Knowing and Learning in Science and Mathematics** 3

These courses require admission to TEP before they can be taken.

- **EHS 326 Classroom Interactions** 3
- **EHS 327 Project-Based Instruction** 3
- **PH 494 Research Methods** 3

**Internship:**

Students must take EHS 425 and EHS 426 in the same term.

- **EHS 425 Apprentice Teaching** 6
- **EHS 426 Apprentice Teaching Seminar** 1

### Teaching Field

Must include an academic major of at least 32 semester hours with a minimum of 19 hours in the upper division. (List all courses required for the teaching field.)

See Attached Requirements

### SPECIAL NOTES:

*To be eligible for Class B certification in general science, candidates will need to complete all courses on this checklist, meet Teacher Education Program requirements for certification, AND complete all degree requirements for Materials Engineering.*

For more information, please call (205) 934-8371. Students who ignore this admonition assume responsibility for their own mistakes.

**Dean of Education: [Signature]**

Date: 6-20-14
Class B General Science Education Program Checklist
Teaching Field Courses (32/19 Analysis)

Teaching Field Courses

BY 115-499 3

Lower Division Courses (All of the Courses Below are Required)

CH 115/116 Chemistry I with Lab 4
CH 117/118 Chemistry II with Lab 4
PH 221 General Physics I with Lab 4
PH 222 General Physics II with Lab 4
AST 101/111 Astronomy of the Universe with Lab OR
AST 102/112 Astronomy of Stellar Systems with Lab OR
ES 101/102 Physical Geology with Lab OR
ES 103/104 History of the Earth with Lab 4
CE 210 Statics 3
CE 220 Mechanics of Solids with Lab 3

Upper Division Courses (All of the Courses Below are Required)

MSE 380 Thermodynamics of Materials 3
MSE 381 Physical Materials 3
MSE 382 Mechanical Behavior of Materials 3
MSE 413 Composite Materials 3
MSE 430 Polymeric Materials and Lab 4
PH 494 Research Methods 3