

Murray State University
Bachelor of Science in Engineering Physics (CIP 14.1201)/Physics Certification – Grades 8-12
Department of Physics
Program Guidesheet/Advising Form

Student's Name: _____ M# _____

COURSE DESCRIPTION	HOURS	SEMESTER	GRADE
Oral and Written Communication (7 hours)			
ENG 105 Critical Reading, Writing, and Inquiry	4	_____	_____
COM 161 Introduction to Public Speaking	3	_____	_____
Global Awareness, Cultural Diversity, and the World's Artistic Traditions (3 hours)			
Global, Cultural, Art Elective	3	_____	_____
Scientific Inquiry, Methodologies, and Quantitative Skills (15 hours)			
MAT 250 Calculus and Analytic Geometry	5	_____	_____
MAT 308 Calculus and Analytic Geometry II	5	_____	_____
CHE 201 General College Chemistry	5	_____	_____
Social and Self-Awareness and Responsible Citizenship (6 hours)			
One Ethics, Social Responsibility and Civic Engagement category course	3	_____	_____
ECO 231 Principles of Microeconomics	3	_____	_____
World's Historical Literary, and Philosophical Traditions (6 hours)			
CIV 201 or CIV 202 World Civilization I or II	3	_____	_____
HUM 211 Western Humanities Traditions	3	_____	_____
University Studies Approved Electives (9 hours)			
PHY 235/236 Mechanics, Heat, & Wave Motion	5	_____	_____
MAT 309 Calculus and Analytic Geometry III	4	_____	_____
Professional Education (38 hours)			
EDU 103 Introduction to Education	3	_____	_____
EDP 260 Psychology of Human Development	3	_____	_____
SED 300 Ed. Of Students w/Dis: A Collab. Exp.	3	_____	_____
EDU 303 Strategies of Teaching	3	_____	_____
EDU 403 Structures & Foundations of Education	2	_____	_____
SEC 420 Practicum in Secondary Schools ¹	3	_____	_____
EDU 405 Evaluation & Measurement in Education ¹	3	_____	_____
SEC 421 Student Teaching in the Secondary Sch.	14	_____	_____
SEC 422 Extended Practicum ²	4	_____	_____
Required Courses (52 hours)			
EGR 099 Freshman Orientation	1	_____	_____
EGR 140 Intro to Comp App in Sci. & Engin.	3	_____	_____
EGR 101 Introduction to Engineering	3	_____	_____
MAT 338 Ordinary Differential Equations	3	_____	_____
EGR 240 Thermodynamics I	3	_____	_____
PHY 255 Electricity, Magnetism and Light	4	_____	_____
PHY 256 Electricity, Magnetism and Light Laboratory	1	_____	_____
EGR 259 Statics	3	_____	_____
EGR 264 Linear Circuits I	4	_____	_____
EGR 330 Dynamics	3	_____	_____
EGR 363 Circuits, Signals, and Systems	3	_____	_____
PHY 370 Intro. To Modern Physics	3	_____	_____
EGR 375 Materials Science	3	_____	_____
EGR 390 Engineering Measurements	3	_____	_____
EGR 460 Electricity and Magnetism I	3	_____	_____
PHY 470 Optics	3	_____	_____
EGR 498 Senior Engineering Design I	3	_____	_____
EGR 499 Senior Engineering Design II	3	_____	_____
Technical Electives (18 hours)			
Engineering Topic electives 12 hours (EGR courses > 300)			
EGR _____	3	_____	_____
EGR _____	3	_____	_____
EGR _____	3	_____	_____

EGR _____ 3 _____

Other approved technical electives from list in catalog

_____ 3 _____
 _____ 3 _____

Total Curriculum Requirements – 154 hrs

¹SEC 420 and EDU 405 must be taken together and two semesters before student teaching.

²SEC 422 must be taken one semester before student teaching.

*NOTE: Check with Department of Engineering and Physics Chair for approved electives.

Physics Teaching Specialization*

The teaching specialization in physics is a path to Secondary Certification in Physics, designed to accompany certification in another science content area. (All College of Education secondary certification course requirements must be met.) **Note: Even though this program exceeds Murray State University’s requirements for a physics minor, in order for a Physics Minor to appear on your transcript, a minor must be declared, and all residential and graduation requirements must be met.**

Physics Teaching Specialization.....36 hrs

AST 115	Introduction to Astronomy	4	_____	_____
AST 116	Introduction to Astronomy Lab	1	_____	_____
PHY 235	Mechanics, Heat and Wave Motion	4	_____	_____
PHY 236	Mechanics, Heat and Wave Motion Laboratory	1	_____	_____
PHY 255	Electricity, Magnetism and Light	4	_____	_____
PHY 256	Electricity, Magnetism and Light Laboratory	1	_____	_____
PHY 370 or 570	Introduction to Modern Physics	3	_____	_____

Required Limited Electives – PHY/EGR courses numbered 300 or above 9

PHY/EGR _____	_____ hrs.	_____	_____
PHY/EGR _____	_____ hrs.	_____	_____
PHY/EGR _____	_____ hrs.	_____	_____

Corequisite Math Courses Required:

MAT 250	Calculus and Analytic Geometry I (with PHY 235)	5	_____	_____
MAT 308	Calculus and Analytic Geometry II (with PHY 255)	5	_____	_____

Total Hours Required for Physics Specialization – 36 hrs

IMPORTANT: Upon completion of 60 undergraduate credit hours (junior status), students enrolled or desiring enrollment in education coursework beyond 12 hours credit MUST be admitted to the Teacher Education Program. Students must be admitted to Teacher Education prior to enrollment in upper level teacher education courses.

Note: Continuous assessment procedures are used to document and systematically monitor student progress through each program in order to determine the degree to which students have internalized and can demonstrate proficiency with the Kentucky Teacher Standards. The eligibility portfolio is formally assessed during the student teaching semester. For additional information and requirements, each student should see his/her advisor.

Teacher certification requirements are subject to change. Before registering for the test(s), please refer to the Education Professional Standards Board (EPSB) website at www.kyepsb.net for current requirements or contact the Division of Internship and Assessment at 502-564-4606 or 888-598-7667.

GRADE POINT AVERAGE REQUIREMENTS:

Grade point averages are reviewed during three checkpoints: admission to teacher education (see Requirements for Admission to Teacher Education), admission to student teaching (requires a 2.75 average overall; a 2.75 average in content area; a 2.75 average in professional education) and at the time of completion/graduation (2.75 overall).

REQUIREMENTS FOR ADMISSION TO TEACHER EDUCATION AND STUDENT TEACHING AT MURRAY STATE UNIVERSITY Rev. (9/2015)

Teacher Education

To be admitted to teacher education, students must:

1. Attend an admission to teacher education orientation.
2. Earn passing scores on the Core Academic Skills for Educators (CASE) test with these subject scores – Reading 156, Writing 162, and Mathematics 150. Request ETS to send scores to Teacher Education Services electronically by using this code, R1494. If any of the PPST subject areas were passed prior to September 1, 2014, use these PPST scores - Reading 176, Writing 174, and Math 174. GRE (Graduate Records Exam) scores may be used for Graduate Students only with a minimum passing score of 150 in verbal, 143 in quantitative, and 4.0 in analytical writing.
3. Earn an overall undergraduate GPA of > 2.75 on a 4.0 scale at the point of admission. This 2.75 minimum GPA remains a requirement throughout the teacher certification program.
4. Complete a minimum of 24 credit hours with a GPA > 2.75 to include the following coursework:
 - a. ENG 101, 102, 104 or 105 with a “B” or higher
 - b. MAT 117 (or higher level math) with a “B” or higher
 - c. COM 161 or HON 165 with a “B” or higher
 - d. EDU 103 with a “B” or higher (or AED 380 or EDU 104 or CTE 200 or MSU 123 or ELE 605 [graduate students])
5. Participate in the admission to teacher education interview and receive their academic advisor’s recommendation to continue the program.
6. Review the Professional Code of Ethics for Kentucky School Personnel. Sign the
 - a. Declaration of Eligibility (pink sheet) affirming a commitment to uphold the code and
 - b. acknowledging awareness of information required for state certification. If answers given on the Declaration of Eligibility change during the time of participation in the teacher education program, the Director of Teacher Education Services must be notified immediately.

These requirements must be documented in *Recruiter*. CASE or GRE scores must be sent to MSU (R1494) via ETS. Admission will only be granted following a successful review by Teacher Education Services.

NOTE: Students who have not been admitted to Teacher Education will not be eligible to enroll in upper level courses that specify admission to teacher education as a prerequisite.

Student Teaching

To be admitted to student teaching, students must have

- 1) been granted admission to Teacher Education;
- 2) filed a formal application in Teacher Education Services two semesters prior to the term in which student teaching is desired (Applications are distributed at scheduled student teaching orientations only.);
- 3) earned and maintained GPA ≥ 2.75 in major/areas, professional education, and overall;
- 4) demonstrated teaching ability in field and clinical situations;
- 5) documented completion of 200 or more field hours and components (beginning 9/1/2013);
- 6) senior, post-bac, or graduate status and have completed all major courses and specialty areas;
- 7) been admitted to Teacher Education;
- 8) completed all required professional teacher education courses (EDU 103, EDP 260, 9) EDU 303, SED 300 and EDU 403, etc. – see specific requirements by major or area) with a GPA > 2.75 GPA;
- 10) filed a valid and current medical examination, which includes a TB risk assessment (to begin student teaching within six months of exam);
- 11) obtained a criminal records background check; and
- 12) supplied TES with any other required information (transcripts, course substitution forms, etc.).

General Requirements for Kentucky Certification

Graduates who wish to be recommended by MSU for an initial Kentucky teaching certificate must have

- 1) successfully completed an approved teacher education program including student teaching;
- 2) filed an application for certification (CA-1) with Teacher Education Services at MSU;
- 3) obtained at least minimal scores required on PRAXIS specialty area tests and the appropriate Principles of Learning and Teaching Test (PLT);
- 4) completed all applicable **computer literacy and applications** requirements;
- 5) earned a bachelor's degree;
- 6) mailed a copy of criminal record check to EPSB; and
- 7) sent official transcript to EPSB.

In addition, in Kentucky, full certification requires the completion of the Kentucky Teacher Internship Program. To be recommended for certification in other states, all Kentucky requirements must be met.

NOTE: Requirements for teacher certification are established by the Kentucky Education Professional Standards Board (KEPSB). Students are cautioned that changes in these requirements may occur after publication of the current Murray State University *Bulletin*. For the most current information, students should check with an advisor in one of the departments in the College of Education.

Student _____

Advisor _____

Date _____

Date _____