2005 – 06 PETITION/PROGRAM SHEET
Degree: Associate of Science
Emphasis: Physics
www.mesastate.edu/schools/snsm/physics/program.htm

About This Emphasis . . .

The Associate of Science (A.S.) degree is designed for students who intend to continue their education and obtain a baccalaureate degree. The A.S. is the appropriate choice for students who will take upper division coursework in mathematics, biological sciences, and physical sciences. The degree program includes the Colorado Statewide General Education Core and meets the lower division general education requirements at most public institutions in Colorado. A number of emphases are available within the A.S. degree. Students choosing one of these emphases will take courses in a discipline in addition to the general education core.

Physics is the study of the universe: what it's made of and how it works, ranging from stars and galaxies to atoms and nuclei and everything in between. Physics forms the foundation of many technical fields including electronics and optics. Physics also features prominently in many of the hottest areas of current research and innovation, such as the multidisciplinary fields of nanotechnology and biophysics.

Students who continue on in the physics baccalaureate program have a wide array of options. Physics majors from Mesa State have gone on to graduate programs in physics, materials science, aerospace engineering, electrical engineering and to medical school. They have also gone directly into jobs in engineering, business, and research. Over the last ten years, Mesa State physics majors have gone to graduate schools at the University of Colorado Boulder, UC Colorado Springs, the Colorado School of Mines, UNLV, UC at Davis, North Carolina State and the University of Minnesota.

POLICIES:

1. It is your responsibility to determine whether you have met the requirements for your degree. Please see your MSC Catalog for a complete list of graduation requirements.
2. You must go to the Registrar's Office and fill out the "Intent to Graduate" form **at the beginning of the semester prior to graduating.**
3. This program sheet must be submitted with your graduation planning sheet to your advisor during the **semester prior to graduating, no later than September 15 for Spring graduates, February 15 for Fall graduates.**
4. Your advisor will sign and forward the Program Sheet, Intent to Graduate Form, and Graduation Planning Sheet to the Department Head for signature.
5. Finally, the Department Head or the department administrative assistant will take the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
6. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your "Intent to Graduate" does not automatically move to a later graduation date.
7. NOTE: The semester before graduation, you may be required to take a Major Field Achievement Test (Exit Exam).

NAME: _____ **STUDENT ID #** _____

LOCAL ADDRESS AND PHONE NUMBER: _____

_____ **( )** _____

I, (Signature)_____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

_____ _____ 20_____
Signature of Advisor Date

_____ _____ 20_____
Signature of Department Head Date

_____ _____ 20_____
Signature of Registrar Date

GENERAL EDUCATION REQUIREMENTS (33 Semester Hours)

Course	No.	Credit	Grade	Term	Year	Trns/Subs
English and Speech: ENGL 111 **and** 112, SPCH 102 (9 semester hours, must earn a grade of "C" or above in ENGL 111 and 112)						
ENGL	111	3				
ENGL	112	3				
SPCH	102	3				
Physical Sciences/Math/Statistics (12 semester hours) Science (minimum 8 semester hours)						
Math/Statistics (minimum 4 semester hours, MATH 113 or higher, must earn a "C" or above) MATH 151 suggested						

Course	No.	Credit	Grade	Term	Year	Trns/Subs
Social and Behavioral Sciences: (6 Semester Hours) (Minimum of 2 different disciplines)						
Humanities (6 semester hours) (Minimum of 2 different disciplines)						

*MATH 151 may count as the general education mathematics requirement. This will leave a balance of 11 hours of free general electives.

Human Performance and Wellness (2 semester hours) HPWA 100 and one HPWE activity

Course	No.	Credit	Grade	Term	Year	Trns/Subs
HPWA	100	1				

Course	No.	Credit	Grade	Term	Year	Trns/Subs
HPWE		1				

Physics Emphasis Requirements (13 Semester Hours)

Course	No.	Credit	Grade	Term	Year	Trns/Subs
PHYS	131	4				
PHYS	131L	1				
PHYS	132	4				
PHYS	132L	1				

Course	No.	Credit	Grade	Term	Year	Trns/Subs
PHYS	231	3				

Electives (12 Semester Hours) Any college level undergraduate courses excluding HPWE.

Course	No.	Credit	Grade	Term	Year	Trns/Subs

Course	No.	Credit	Grade	Term	Year	Trns/Subs

- 60 semester hours are required for the Associate of Science degree. Must meet the academic residency requirements.
- A cumulative grade point average of 2.0 or higher must be maintained for all courses taken and a grade point average of 2.5 or higher must be earned in the Physics area of emphasis.
- No more than one "D" may be used in completing major requirements.
- A grade of "C" or higher must be earned in all general education courses in order to be accepted for the transfer under the Core Transfer Agreements.
- No double counting is allowed between general education requirements and major requirements.
- It is recommended that students work closely with a faculty advisor when selecting appropriate courses and scheduling classes.

GENERAL EDUCATION REQUIREMENTS (minimum 33 Semester Hours)

English and Speech – 9 Semester Hours
ENGL 111 **and** ENGL 112 **or** ENGL 129 ***(by permission)***
And SPCH 102 (required)

See current Mesa State College Catalog for list of courses that fulfill the requirements below.

Mathematics and Science – minimum 12 Semester Hours
Minimum 4 semester hours in Math and minimum 8 semester hours in Science. Both lecture and Lab must be taken in all courses having both. MATH 151 Calculus I is recommended.

Humanities – 6 semester hours. Minimum of two different disciplines required.

Social and Behavioral Sciences – 6 semester hours. Minimum of two different disciplines required.

OTHER REQUIREMENTS (2 Semester Hours)

Human Performance and Wellness – 2 Semester Hours
Each student must take HPWA 100 together with one HPWE Activity course. See current catalog for listing.

Physics Emphasis Requirements (13 Semester Hours)

Required Courses
- PHYS 131 Fundamental Mechanics
- PHYS 131L Fundamental Mechanics Lab
- PHYS 132 Electromagnetism and Optics
- PHYS 132L Electromagnetism and Optics and Lab
- PHYS 231 Modern Physics

Electives: 12 semester hours.

Students are required to participate in exit examinations or other programs deemed necessary to comply with the college accountability requirement. All degree requirements must be completed as described above. Any exceptions or substitutions must be recommended in advance by the faculty advisor and approved by the Department Head.

SUGGESTED COURSE SEQUENCING FOR THE ASSOCIATE OF SCIENCE WITH AN EMPHASIS IN PHYSICS

FRESHMAN YEAR

Fall Semester		Hours
PHYS 131	Fundamental Mechanics	4
PHYS 131L	Fundamental Mechanics Lab	1
ENGL 111	English Composition	3
MATH 151	Calculus I	5
General Education	Humanities	3
		16

Spring Semester		Hours
PHYS 132	Electromagnetism and Optics	4
PHYS 132L	Electromagnetism and Optics Lab	1
ENGL 112	English Composition	3
MATH 152	Calculus II (suggested)	5
SPCH 102	Speechmaking	3
		16

SOPHOMORE YEAR

Fall Semester		Hours
PHYS 231	Modern Physics	3
MATH 253	Calculus III (suggested)	4
General Education	Natural Science	4
General Education	Social/Behavioral Science	3
		14

Spring Semester		Hours
Elective (Physics course suggested)		3
General Education	Humanities	3
General Education	Natural Science	3
General Education	Social/Behavioral Science	3
HPWA 100	Health and Wellness	1
HPWE Activity		1
		14