REQUIREMENTS

CORE CURRICULUM

The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at marshall.edu/gened.

MY ADVISOR'S NAME IS:

CORE 1: CRITICAL THINKING						COR	CORE 2:						
	CODE	COURSE NAME		HRS	GRADE		CODE	COURSE NAME		HRS	GRADE		
	FYS 100	First Year Sem Crit Thinking	•	3		**	ENG 101	Beginning Composition	•	3			
T	MTH 229	Critical Thinking Course	•	3		***	ENG 201	Advanced Composition	•	3			
		Critical Thinking Course	•	3				Core II Communication	•	3			
						***	MTH 229	Calculus I	• •	5			
	Additiona	Il University Requirements						Core II Humanities	•	3			
	MI 411	Writing Intensive		3				Core II Social Science	•	3			
		Writing Intensive		3				Core II Fine Arts	•	3			
		Multicultural or International		3			BSC 228	Core II Natural/Physical Science	• •	4			
	PHY 491/492	Capstone		2									

MAJOR-SPECIFIC

All Physics majors with Medical Imaging emphasis are required to take the following courses:

	CODE	COURSE NAME		HRS	GRADE		CODE	COURSE NAME		HRS	GRADE
17	PHY 202	General Physics I Lab	•	1			MTH 230	Calculus II	•	1 .	
	PHY 211	University Physics	•	4			MTH 231	Calculus III	•	3 _	
	PHY 204	Gerenal Physics II Lab	•	1			BSC 227	Human Anatomy	•	4	
	PHY 213	University Physics II	•	4			BSC 228	Human Physiology	•	4	
	PHY 300	Electricity and Magnetism	•	3			STA 345	Applied Prob. and Statistics	•	3 .	
	PHY 302	Electricity & Magnetism II	•	3			MI 201	Intro to Radiography	•	3 .	
17	PHY 304	Optics	•	3		**	MI 202	Patient Care in Imaging Science	•	3 .	
17	PHY 405	Optics Lab	•	2		**	MI 204	Radiographic Anatomy	•	3 .	
	PHY 308	Thermal Physics	•	3		***	MI 205	Imaging Procedures I	•	4 .	
	PHY 320	Intro Modern Physics	•	3			MI206	Clinical Practice I	•	4 .	
T	PHY 330	Mechanics	•	3			MI 207	Imaging Procedures II	•	3 .	
	PHY 360	Medical Physics	•	3			MI 208	Pharm. & Drug Admin for Imaging	•	2 .	
	PHY 421	Modern Physics Lab	•	2			MI 210	Clinical Practice II	•	4 .	
	PHY	Capstone (C)	• •	2			MI 411	Transcultural Healthcare (WI)	•	3	
	491/492										
T	PHY 442	Quantum Mechanics	•	3							
	PHY 445	Math Methods of Physics	•	3							
	PHY 446	Math Methods of Physics II	•	3							

MAJOR INFORMATION

- Students are required to know and track their degree requirements for graduation or for entrance to a professional school.
- In addition to the Core General Education requirements, the College of Science requires 3 hours of Calculus, and 40 hours of upper level credit.
- Coursework listed as "elective" may vary for each student. Students are encouraged to use elective hours toward a minor or toward prerequisities.
- Students are strongly encouraged to select courses that meet two or more Core or College requirements. For example, a writing intensive literature course could satisfy the Core II humanities requirement as well as the university writing intensive requirement.
- Course offerings and course attributes are subject to change each semester. Please consult each semester's schedule of courses for availability and

- Math is based on an ACT Mathematics score of 27 or higher. Students with an ACT Mathematics score less than 27 will be placed in the appropriate prerequisite mathematics and science courses.
- In order to graduate, students must maintain a 2.00 Overall GPA and receive a grade of C or better in each course required for the major.

FOUR YEAR PLAN COLLEGE OF SCIENCE 2019-2020

MY ADVISOR'S NAME IS:

PHYSICS MEDICAL IMAGING

TOTAL HOURS Summer Term (optional):

A course of study in physics, resulting in a B.S. degree in physics, prepares students for a wide variety of opportunities, such as engineering careers in the private sector, careers in the health professions, employment in industry and government laboratories, advanced technology jobs in science and technology related fields, and careers as science teachers. The B.S. degree program is also excellent preparation for advanced degrees in physics, astronomy, engineering, medicine, or law.

		FALL SEMESTER						SPRING SEMESTER			
	CODE	COURSE NAME		HRS	GRADE		CODE	COURSE NAME		HRS	GRAD
	PHY 202	General Physics I Lab	•	1		1	ENG 201	Advanced Composition	•	3	
	PHY 211	University Physics	♦	4			PHY 204	General Physics II Lab	•	1	
₹	MTH 229	Calculus I (CT)	• •	5			PHY 213	University Physics II	•	4	
₹	ENG 101	Beginning Composition	•	3				Core II Social Science (MC/I)	•	3	
	FYS 100	First Year Sem Crit Thinking	•	3		**	MTH 230	Calculus/Analytical Geom II	•	4	
•	UNI 100	Freshman First Class		1							
1											
	TOTAL H	DURS		17			TOTAL HO	DURS		15	
Sun	nmer Term (op	otional):									
		FALL SEMESTER						SPRING SEMESTER			
	CODE	COURSE NAME		HRS	GRADE		CODE	COURSE NAME		HRS	GRAI
₹	PHY 320	Intro Modern Physics	•	3			PHY 446	Math Methods of Physics II	•	3	
**	PHY 421	Modern Physics Lab	♦	2		1	PHY 304	Optics	•	3	
	PHY 445	Math Methods of Physics	♦	3		***	PHY 405	Optics Lab	•	2	
	MTH 231	Calculus/Analytical Geom III	•	4			BSC 228	Human Physiology	•	4	
	BSC 227	Human Anatomy	•	4				Core II Communication	•	3	
i											
	TOTAL H	OURS		16			TOTAL HO	DURS		15	
Sun	nmer Term (or	otional):									
		FALL SEMESTER						SPRING SEMESTER			
	CODE	COURSE NAME		HRS	GRADE		CODE	COURSE NAME		HRS	GRAD
1	PHY 300	Electricity & Magnetism	•	3		***	PHY 442	Quantum Mechanics	•	3	
,	PHY 330	Mechanics	♦	3			PHY 302	Electricity & Magnetism II	•	3	
	PHY 308	Thermal Physics	•	3			PHY 360	Medical Physics	•	3	
	MI 201	Intro to Radiography	•	3			MI 411	Transcultural Healthcare (WI)	•	3	
	STA 345	Applied Prob. and Statistics	•	3				Core II Humanities (CT, WI)	•	3	
	TOTAL H	DURS		15			TOTAL HO	DURS		15	
Summer Term (optional):											
		FALL SEMESTER						SPRING SEMESTER			
		COURSE NAME		HRS	GRADE		CODE	COURSE NAME		HRS	GRAI
H	CODE						PHY 492	Capstone	• •	1	
	CODE PHY 491	Capstone	• •	1							
		Capstone Patient Care in Imaging Science	• •	3				Core II Fine Arts	•	3	
	PHY 491 MI 202			•			MI 207	Core II Fine Arts Imaging Procedures II	•	3	
	PHY 491 MI 202	Patient Care in Imaging Science	•	3			MI 207 MI 208		•		

TOTAL HOURS

INVOLVEMENT OPPORTUNITIES

- Campus Activity Board
- JMELI
- · Commuter Student Advisory Board
- · Community Engagement Ambassadors
- Club Sports
- Religious Organizations
- Political Organizations
- · Residence Hall Association
- Cultural Organizations
- National Society of Leadership and Success
- · Greek Life

RELATED MAJORS

- Mechanical Engineering
- Civil Engineering
- Safety Technology
- Computer Science
- Chemistry
- Biology

GRADUATION REQUIREMENTS

- Have a minimum of 120 credit hours (some colleges or majors require more);
- · Have an overall and Marshall Grade Point Average of 2.00 or higher;
- Have an overall Grade Point Average of 2.00 or higher in the major area of study;
- Have earned a grade of C or better in English 201 or 201 H;
- Have met all major(s) and college requirements;
- Have met the requirements of the Core Curriculum;
- · Have met the residence requirements of Marshall University, including 12 hours of 300/400 level coursework in the student's college (see section entitled "Residence Requirements" in the undergraduate catalogue);
- Be enrolled at Marshall at least one semester of the senior year;
- · Have transferred no more than 72 credit hours from an accredited West Virginia twoyear institution of higher education.

Colleges and specific programs may have unique requirements that are more stringent than those noted above. Students are responsible for staying informed about and ensuring that they meet the requirements for graduation.

This academic map is to be used as a guide in planning your coursework toward a degree. Due to the complexities of degree programs, it is unfortunate but inevitable that an error may occur in the creation of this document. The official source of degree requirements at Marshall University is DegreeWorks available in your myMU portal. Always consult regularly with your advisor.

PHYSICS-MEDICAL IMAGING — 2019-2020

YEAR ONE



Have questions? Need to talk? You already have a Friend-At-Marshall ready to help you succeed. Find your FAM Peer Mentor here: www.marshall.edu/fam



Participate in a Career Exploration Experience (job shadow) to identify your career goals.



Join or create a club or organization on campus about a particular issue you care about. Marshall has more than 200 student organizations.



Stay on the Herd Path and come to class! Class attendance is more important to your success than your high school GPA, your class standing, or your ACT/SAT scores.





In order to graduate on time, you need to take an average of 15 credits per semester. Are you on track? Take 15 to Finish!



Take a career self-assessment to help determine what majors fit your talents and interests.

College is a great time to experience the world! Consider studying abroad in the summer, during Spring Break, or for an entire semester.

YEAR THREE



Submit your work for annual competitions and awards.



Complete graduate admissions exams (GRE, MCAT, LSAT) the summer before your senior year.



Apply to be a New Student Orientation Leader or a Campus Tour Guide.



Meet with a career education specialist to conduct a "gap analysis." Figure out the skills you'll need for the career you want while you still have time to build them.





Are you on track to graduate? Meet with your advisor for your Junior Eval to make sure you know what requirements you have left.



Take an elective course that links diversity to your field of study.

Want to continue your education and increase your opportunities? Talk to a faculty member about whether graduate school fits your career goals.





Develop relationships with professors who can serve as future references by attending their office hours.



Did you do really well in a hard course? Become a Tutor or a Supplemental Instructor.



No need to wait until graduate school. Discuss undergraduate research opportunities with faculty in your major right now.



YEAR TWO

Are you completing enough credits to graduate on time? Dropping or failing a class can put you behind. Use summer terms to quickly get back on track.

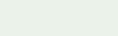


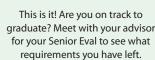
Begin your Math Methods sequence, physics sequence to meet your prerequisites for upper division classes.



Take a pulse check. Know what you need to do every year to keep your grants, scholarships, or federal financial aid.

Think about who can help you grow as a student and a professional professors, advisors, alumni, etc. and ask at least one to be your mentor.







Did you do really well in a hard course? Become a Tutor or a Supplemental Instructor.



Be at the top of your professional game! Prepare a final resume and practice your interview skills with a career coach in Career Education.





Participate in Department of Physics outreach events with local high school students. Stay engaged and make a difference.

Prepare to present at Physics Department Research and Covocation Day and CoS Research EXPO in April.



TRANSFERABLE SKILLS

· Mathematical Ability

· Scientific Ability

Skills

· Attention to Detail

Organizational Skills

Accoustical Physics

Chemical Physics

Nuclear Physics

High Energy Physics

· Science Education

• Research and Development

Astronomy

 Astrophysics Biophysics

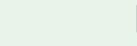
ASSOCIATED CAREERS

ASSOCIATED WITH THIS MAJOR

• Strong Oral and Written Communication

Marshall University College of Science One John Marshall Drive Huntington, WV 25755 1-304-696-2371 cos@marshall.edu marshall.edu/cos

YEAR FOUR



Strengthen your resume and enhance your presentation skills. Present what you've learned at an academic conference off campus.







Networking is key! Attend a

Career Expo to seek employment



