

Space Science, MS

Information below is intended for prospective students who are considering a Master's degree in Space Science from UAH.

All questions about enrolling in our M.S. program should be directed to Dr. Jakobus le Roux (jakobus.leroux@uah.edu), Chair of the SPA Graduate Committee.

Requirements for M.S. Degree - Thesis Option

1. Complete the core coursework (15 credit hours), see Core Courses below.
2. Complete an additional 9 credit hours of elective courses. These are chosen from the Elective Courses list.
3. Complete SPA 582 and SPA 796 once.
4. Complete 6 hours of Master's thesis (SPA 699).
5. Write and defend a Master's thesis.

Code	Title	Semester Hours
Core Courses		
SPA 522	INTRODUCTION TO PLASMA PHYSICS	3
SPA 610	ADV MATH METHDS FOR SPA SCI	3
SPA 622	CLASSICAL & QUANTUM STATISTICS	3
SPA 624	SPACE PHYSICS I	3
SPA 631	WAVES AND FIELDS	3
Required Courses		
SPA 582	SCIENCE CAREER PREP	1
SPA 796	JOURNAL CLUB	1
Elective Courses		
Choose 3 courses from the following:		
SPA 526	SPACE WEATHER	
SPA 623	TRANSPORT PROCESSES IN SPACE	
SPA 625	SPACE PHYSICS II	
SPA 627	HIGH ENERGY RADIATION DET&MSRM	
SPA 628	SOLAR PHYSICS	
SPA 629	ASTROPHYSICAL FLUID DYNAMICS	
SPA 630	WAVES IN FLUIDS	
SPA 662	COMPUTATIONAL PHYSICS	
SPA 663	COMPUTATIONAL FLUID DYNMC &MHD	
SPA 689	SELECTED TOPICS	
SPA 741	PHYSICS OF COSMIC RAYS	
SPA 742	GAMMA-RAY BURSTS AND JETS	
SPA 771	COMPETITIVE GRANT WRITING WKSP	
SPA 789	SELECTED TOPICS	
Total Semester Hours		26

Year 1

Fall		Semester Hours
SPA 522	INTRODUCTION TO PLASMA PHYSICS	3
SPA 582	SCIENCE CAREER PREP	1
SPA 610	ADV MATH METHDS FOR SPA SCI	3
SPA 622	CLASSICAL QUANTUM STATISTICS	3
Term Semester Hours:		10
Spring		
SPA 526	SPACE WEATHER	3
SPA 624	SPACE PHYSICS I	3

SPA 631	WAVES AND FIELDS	3
SPA 796	JOURNAL CLUB	1
Term Semester Hours:		10
Summer		
SPA 699	MASTER'S THESIS	3
Term Semester Hours:		3
Year 2		
Fall		
SPA 627	HIGH ENERGY RADIATION DETMSRM	3
SPA 662	COMPUTATIONAL PHYSICS	3
SPA 699	MASTER'S THESIS	3
Term Semester Hours:		9
Total Semester Hours:		32

Requirements for M.S. Degree - Non Thesis Option

1. Complete the core coursework (15 credit hours), see Core Courses below.
2. Complete an additional 15 credit hours of elective courses. These are chosen from the Elective Courses list.
3. Complete SPA 582 and SPA 796 once.
4. Pass a Comprehensive Examination ("Comps"). The Comps are offered annually during the summer semester and consist of three sections: (a) Electromagnetic Theory, (b) Classical and Quantum Statistics, and (c) Plasma Physics. A passing grade of 40% or above in all three sections is required for a M.S. pass.

Code	Title	Semester Hours
Core Courses		
SPA 522	INTRODUCTION TO PLASMA PHYSICS	3
SPA 610	ADV MATH METHDS FOR SPA SCI	3
SPA 622	CLASSICAL & QUANTUM STATISTICS	3
SPA 624	SPACE PHYSICS I	3
SPA 631	WAVES AND FIELDS	3
Required Courses		
SPA 582	SCIENCE CAREER PREP	1
SPA 796	JOURNAL CLUB	1
Elective Courses		
Choose 5 courses from the following:		
SPA 526	SPACE WEATHER	
SPA 623	TRANSPORT PROCESSES IN SPACE	
SPA 625	SPACE PHYSICS II	
SPA 627	HIGH ENERGY RADIATION DET&MSRM	
SPA 628	SOLAR PHYSICS	
SPA 629	ASTROPHYSICAL FLUID DYNAMICS	
SPA 630	WAVES IN FLUIDS	
SPA 662	COMPUTATIONAL PHYSICS	
SPA 663	COMPUTATIONAL FLUID DYNMC &MHD	
SPA 689	SELECTED TOPICS	
SPA 741	PHYSICS OF COSMIC RAYS	
SPA 742	GAMMA-RAY BURSTS AND JETS	
SPA 771	COMPETITIVE GRANT WRITING WKSP	
SPA 789	SELECTED TOPICS	
Total Semester Hours		32

Year 1

		Semester Hours
Fall		
SPA 522	INTRODUCTION TO PLASMA PHYSICS	3
SPA 582	SCIENCE CAREER PREP	1
SPA 610	ADV MATH METHDS FOR SPA SCI	3
SPA 622	CLASSICAL QUANTUM STATISTICS	3

Term Semester Hours:		10
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Spring

SPA 526	SPACE WEATHER	3
SPA 624	SPACE PHYSICS I	3
SPA 631	WAVES AND FIELDS	3

Term Semester Hours:		9
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Year 2

Fall		
SPA 625	SPACE PHYSICS II	3
SPA 627	HIGH ENERGY RADIATION DETMSRM	3
SPA 662	COMPUTATIONAL PHYSICS	3
SPA 796	JOURNAL CLUB	1

Term Semester Hours:		10
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Spring

SPA 628	SOLAR PHYSICS	3
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Term Semester Hours:		3
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Total Semester Hours:		32
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