

2+2 Degree Plan Checklist

Associate of Science in Liberal Arts and Sciences

BS in Physics (Mathematical Physics Track)

Arkansas State University – Beebe

Associate of Science in Liberal Arts and Sciences¹

Possible Prerequisites			Semester	Hours	Grade
UNIV	1003	Principles of Academic Success (required if registering for a remedial course)		(3)	
ENG	0013	Precollege Literacy		N/C	
ENG	0023	College Literacy (taken simultaneously with ENG 1003 – Freshman English I)		N/C	
MATH	0013	Foundations of Algebra I		N/C	
MATH	0023	Foundations of Algebra II		N/C	

General Education Requirements (35 credit hours)

English/Communication (12 credit hours)			UCA ²	Semester	Hours	Grade
ENG	1003	Freshman English I	WRTG 1310		3	
ENG	1013	Freshman English II	WRTG 1320		3	
SPCH	1203	Oral Communications	SPCH 1300		3	
ENG	2003	World Literature I or	ENGL 2305		3	
ENG	2013	World Literature II	ENGL 2306			

Mathematics (3 credit hours)			UCA	Semester	Hours	Grade
MATH	1023	College Algebra	MATH 1390		3	

Lab Sciences (8 credit hours)			UCA	Semester	Hours	Grade
BIOL	1014	Principles of Biology	BIOL 1440		4	
PHYS	2074	University Physics I	PHYS 1441		4	

Fine Arts (3 credit hours)			UCA	Semester	Hours	Grade
ART	2503	Fine Arts – Visual or	ART 2300 MUS 2300 THEA 2300		3	
MUS	2503	Fine Arts – Musical or				
THEA	2503	Fine Arts – Theatre or				
THEA	2513	Fine Arts – Film or				
HUM	2003	Introduction to Humanities I or				
HUM	2013	Introduction to Humanities II				

Social Sciences (6 credit hours)			UCA	Semester	Hours	Grade
HIST	2763	The United States to 1876 or	HIST 2301		3	
HIST	2773	The United States Since 1876 or	HIST 2302			
POSC	2103	Introduction to United States Government	PSCI 1330			
HIST	1013	World Civilization to 1660 or	HIST 1310		3	
HIST	1023	World Civilization since 1660	HIST 1320			

Social or Behavioral Science Elective (3 credit hours)			UCA	Semester	Hours	Grade
HIST	1013	World Civilization to 1660 or	HIST 1310		3	
HIST	1023	World Civilization since 1660 or	HIST 1320			
HIST	2763	The United States to 1876 or	HIST 2301			
HIST	2773	The United States Since 1876 or	HIST 2302			
POSC	2103	Introduction to United States Government or	PSCI 1330			
GEOG	2613	Introduction to Geography or	GEOG 1305			
GEOG	2603	World Regional Geography or	GEOG 1300			
SOC	2213	Principles of Sociology or	SOC 1300			
PSY	2013	Introduction to Psychology	PSYC 1300			

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Physics Foundation (25 credit hours)

			UCA	Semester	Hours	Grade
MATH	1033	Plane Trigonometry	MATH 1392		3	
MATH	2205	Calculus I	MATH 1496		5	
MATH	2215	Calculus II	MATH 1497		5	
PHYS	2084	University Physics II	PHYS 1442		4	
		General Elective			3	
		General Elective			3	
		General Elective			2	

Total Hours: 60³

University of Central Arkansas

Bachelor of Science in Physics (Mathematical Physics Track)

UCA Courses (60 credit hours)⁴

				Semester	Hours	Grade
MATH	2471	Calculus III			4	
MATH	3331	Ordinary Differential Equations			3	
MATH	4362	Advanced Calculus I			3	
MATH	4363	Advanced Calculus II			3	
MATH	4371	Introduction to Probability			3	
MATH	4385	Complex Analysis			3	
PHYS	2443	University Physics 3			4	
PHYS	3210	Experiments in Physics 1			2	
PHYS	3220	Experiments in Physics 2			2	
PHYS	3341	Mathematical Methods in Physics			3	
PHYS	3342	Mechanics			3	
PHYS	3343	Thermal Physics			3	
PHYS	3353	Quantum Mechanics 1			3	
PHYS	3354	Quantum Mechanics 2			3	
PHYS	3360	Electromagnetism 1			3	
PHYS	3361	Electromagnetism 2			3	
PHYS	4111	Senior Capstone 1			1	
PHYS	4211	Senior Capstone 2			2	
PHYS	4341	Advanced Mathematical Physics			3	
PHYS	4351	Computational Physics			3	
WRTG	3310	Technical Writing			3	

Total Hours: 120⁵

¹ See your ASU-Beebe advisor for degree and graduation information.

² UCA transfer course designations are either guaranteed by ACTS (acts.adhe.edu) or have been approved as a substitution by UCA. Unless otherwise noted, courses for which no UCA equivalent course is listed would transfer in as elective credit.

³ Students completing the AS in Liberal Arts and Sciences degree requirements, as shown above, with a minimum 2.0 cumulative GPA, will have satisfied the UCA Lower-Division Core requirements and will be admitted to the BS in Physics (Mathematical Physics Track) degree program as a junior.

⁴ For more specific information about degree requirements within the junior and senior years at UCA, please review the UCA Undergraduate Bulletin (<http://uca.edu/ubulletin>) and consult your UCA academic advisor.

⁵ This degree program requires a total of 120 semester credit hours, including at least 40 upper-division credit hours completed at UCA.