



2+2 Degree Plan Checklist
Associate of Science in Liberal Arts and Sciences
BS in Mathematics (Data Science)



University of Arkansas-Pulaski Technical College¹
Associate of Science in Liberal Arts and Sciences²

General Education Requirements (35 credit hours)

English/Communication (9 credit hours)			UCA³	Semester	Hours	Grade
ENGL	1311	English Composition I	WRTG 1310		3	
ENGL	1312	English Composition II	WRTG 1320		3	
SPCH	1300	Speech Communications	COMM 1300		3	

Mathematics (3 credit hours)			UCA	Semester	Hours	Grade
MATH	1302	College Algebra	MATH 1390		3	

Lab Sciences (8 credit hours)			UCA	Semester	Hours	Grade
BIOL	1100/1300	Biology for Non-Majors and Lab <i>(or other ASLAS Life Science with Lab)</i>	BIOL 1400		4	
PHYS	1100/1300	Physical Science and Lab <i>(or other ASLAS Physical Science with Lab)</i>	PHYS 1400		4	

Arts and Humanities (3 credit hours)			UCA	Semester	Hours	Grade
ARTS	2300	Choose one: Introduction to Visual Art	ART 2300		3	
MUSC	2300	Introduction to Music	MUS 2300			
THEA	2300	Introduction to Theatre <i>(or other ASLAS Arts and Humanities)</i>	THEA 2300			

Literature (3 credit hours)			UCA	Semester	Hours	Grade
ENGL	2337	Choose one: World Literature from the Beginning to 1650	ENGL 2305		3	
ENGL	2338	World Literature from 1650 to the Present <i>(or other ASLAS Literature)</i>	ENGL 2306			

History/Government (3 Credit Hours)			UCA	Semester	Hours	Grade
HIST	2311	Choose one: US History to 1877	HIST 2301		3	
HIST	2312	US History since 1877	HIST 2302			
POLS	1310	American National Government	PSCI 1330			

Social Sciences (6 credit hours)			UCA	Semester	Hours	Grade
GEOG	2310	Choose two: Cultural Geography	GEOG 1320		6	
PSYC	2300	Psychology and the Human Experience	PSYC 1300			
SOCI	2300	Introduction to Sociology <i>(or other ASLAS Social Science)</i>	SOC 1300			

Mathematics Major and Computer Science Minor (25 credit hours)⁴

			UCA	Semester	Hours	Grade
CIS	2514	Introduction to Computer Science I	CSCI 1470		4	
CIS	2644	Introduction to Computer Science II	CSCI 1480		4	
CIS	2733	Data Structures	CSCI 2320		3	
MATH	1303	Trigonometry	MATH 1392		3	
MATH	1404	Calculus I	MATH 1496		4	
MATH	1405	Calculus II	MATH 1497		4	
		<i>ASLAS Approved Elective</i>			3	

Total Hours: 60⁵



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University of Central Arkansas
Bachelor of Science in Mathematics (Data Science)
UCA Courses (60 credit hours)⁶

			Semester	Hours	Grade
MATH	2441	Introduction to Mathematical Computation		4	
MATH	2471	Calculus III		4	
MATH	3311	Statistical Methods		3	
MATH	3320	Linear Algebra (UD UCA Core: I)		3	
MATH	3392	Multivariate Analysis		3	
MATH	4350	Introduction to the History of Mathematics (UD UCA Core: D)		3	
MATH	4371	Introduction to Probability (UD UCA Core: R)		3	
MATH	4373	Regression Analysis		3	
MATH	4391	Machine Learning		3	
MATH	4395	Practicum in Data Science (UD UCA Core: Z)		3	
Choose two:					
MATH	3331	Ordinary Differential Equations I (UD UCA Core: C)		6	
MATH	3360	Introduction to Rings & Fields			
MATH	3362	Introduction to Group Theory			
MATH	3381	Data Cleaning & Visualization			
MATH	3391	Nonparametric Statistics			
MATH	4305	Ordinary Differential Equations II			
MATH	4306	Modeling & Simulation (UD UCA Core: Z)			
MATH	4315	Introduction to Partial Differential Equations			
MATH	4316	Fundamentals of Applied Math for Fluid Mechanics & Granular Materials			
MATH	4330	Mathematical Modeling in Biology			
MATH	4340	Numerical Methods			
MATH	4362	Advanced Calculus I (UD UCA Core: Z)			
MATH	4363	Advanced Calculus II			
MATH	4375	Introduction to Topology I			
MATH	4385	Complex Analysis			
CSCI		Upper Division Computer Science Minor Course			3
CSCI		Upper Division Computer Science Minor Course		3	
		Upper Division General Elective		3	
		Upper Division General Elective		1	
		General Electives		12	

Total Hours: 120⁷

¹ Please see your UA-PTC advisor for degree and graduation information.

² Agreement requirements are guaranteed in accordance with the academic year of initial enrollment at UA-PTC, not to precede the academic year during which the agreement first took effect. A period of non-enrollment of 12 months or more requires that the student adhere to the agreement revision corresponding with the academic year of re-enrollment.

³ UCA course is either guaranteed by ACTS (acts.adhe.edu) or by UCA Department Chair approval (if blank, elective credit will be awarded).

⁴ This agreement recommends a minor in Computer Science.

⁵ 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 and will be admitted to the BS in Mathematics (Data Science) degree program as a junior.

⁶ In order to receive important communications about transferring to UCA, students are encouraged to create a UCA student account at gopurple.uca.edu. For more information about the 2+2 program, students may also send email inquiries to ucatransfer@uca.edu.

⁷ This agreement requires 120 credit hours as follows: maximum 60 at UA-PTC and remaining 60 at UCA (40 of which must be upper-division).