



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



**University of Arkansas-Pulaski Technical College<sup>1</sup>**  
**Associate of Science in Liberal Arts and Sciences<sup>2</sup>**

**General Education Requirements (35 credit hours)**

| <b>English/Communication (9 credit hours)</b> |       |                        |  | <b>UCA<sup>3</sup></b> | <b>Semester</b> | <b>Hours</b> | <b>Grade</b> |
|-----------------------------------------------|-------|------------------------|--|------------------------|-----------------|--------------|--------------|
| ENGL                                          | 10103 | English Composition I  |  | WRTG 1310              |                 | 3            |              |
| ENGL                                          | 10203 | English Composition II |  | WRTG 1320              |                 | 3            |              |
| SPCH                                          | 10003 | Speech Communications  |  | COMM 1300              |                 | 3            |              |

| <b>Mathematics (3 credit hours)</b> |       |                 |  | <b>UCA</b> | <b>Semester</b> | <b>Hours</b> | <b>Grade</b> |
|-------------------------------------|-------|-----------------|--|------------|-----------------|--------------|--------------|
| MATH                                | 11003 | College Algebra |  | MATH 1390  |                 | 3            |              |

| <b>Lab Sciences (8 credit hours)</b> |             |                                                                          |  | <b>UCA</b> | <b>Semester</b> | <b>Hours</b> | <b>Grade</b> |
|--------------------------------------|-------------|--------------------------------------------------------------------------|--|------------|-----------------|--------------|--------------|
| BIOL                                 | 10031/10043 | Biology for Non-Majors and Lab<br>(or other ASLAS Life Science with Lab) |  | BIOL 1400  |                 | 4            |              |
| PHSC                                 | 10043/10031 | Physical Science and Lab<br>(or other ASLAS Physical Science with Lab)   |  | PHYS 1400  |                 | 4            |              |

| <b>Arts and Humanities (3 credit hours)</b> |       |                                                                                                                                              |  | <b>UCA</b> | <b>Semester</b> | <b>Hours</b> | <b>Grade</b> |
|---------------------------------------------|-------|----------------------------------------------------------------------------------------------------------------------------------------------|--|------------|-----------------|--------------|--------------|
| ARHS                                        | 10003 | <b>Choose one:</b><br>Introduction to Visual Art<br>Introduction to Music<br>Introduction to Theatre<br>(or other ASLAS Arts and Humanities) |  | ART 2300   |                 | 3            |              |
| MUSC                                        | 10003 |                                                                                                                                              |  | MUS 2300   |                 |              |              |
| THTR                                        | 10003 |                                                                                                                                              |  | THEA 2300  |                 |              |              |

| <b>Literature (3 credit hours)</b> |       |                                                                                                                                               |  | <b>UCA</b> | <b>Semester</b> | <b>Hours</b> | <b>Grade</b> |
|------------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------|--|------------|-----------------|--------------|--------------|
| ENGL                               | 21103 | <b>Choose one:</b><br>World Literature from the Beginning to 1650<br>World Literature from 1650 to the Present<br>(or other ASLAS Literature) |  | ENGL 2305  |                 | 3            |              |
| ENGL                               | 21203 |                                                                                                                                               |  | ENGL 2306  |                 |              |              |

| <b>History/Government (3 Credit Hours)</b> |       |                                                                                                   |  | <b>UCA</b> | <b>Semester</b> | <b>Hours</b> | <b>Grade</b> |
|--------------------------------------------|-------|---------------------------------------------------------------------------------------------------|--|------------|-----------------|--------------|--------------|
| HIST                                       | 21103 | <b>Choose one:</b><br>US History to 1877<br>US History since 1877<br>American National Government |  | HIST 2301  |                 | 3            |              |
| HIST                                       | 21203 |                                                                                                   |  | HIST 2302  |                 |              |              |
| PLSC                                       | 20003 |                                                                                                   |  | PSCI 1330  |                 |              |              |

| <b>Social Sciences (6 credit hours)</b> |       |                                                                                                                                                 |  | <b>UCA</b> | <b>Semester</b> | <b>Hours</b> | <b>Grade</b> |
|-----------------------------------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------|--|------------|-----------------|--------------|--------------|
| GEOG                                    | 21103 | <b>Choose two:</b><br>Cultural Geography<br>Psychology and the Human Experience<br>Introduction to Sociology<br>(or other ASLAS Social Science) |  | GEOG 1320  |                 | 6            |              |
| PSYC                                    | 11003 |                                                                                                                                                 |  | PSYC 1300  |                 |              |              |
| SOCI                                    | 10103 |                                                                                                                                                 |  | SOC 1300   |                 |              |              |

**Mathematics Major and Computer Science Minor (25 credit hours)<sup>4</sup>**

|      |       |                                     |  | <b>UCA</b> | <b>Semester</b> | <b>Hours</b> | <b>Grade</b> |
|------|-------|-------------------------------------|--|------------|-----------------|--------------|--------------|
| CPSI | 25174 | Introduction to Computer Science I  |  | CSCI 1470  |                 | 4            |              |
| CPSI | 26474 | Introduction to Computer Science II |  | CSCI 1480  |                 | 4            |              |
| CPSI | 27373 | Data Structures                     |  | CSCI 2320  |                 | 3            |              |
| MATH | 12003 | Trigonometry                        |  | MATH 1392  |                 | 3            |              |
| MATH | 14004 | Calculus I                          |  | MATH 1496  |                 | 4            |              |
| MATH | 15004 | Calculus II                         |  | MATH 1497  |                 | 4            |              |
|      |       | ASLAS Approved Elective             |  |            |                 | 3            |              |

**Total Hours: 60<sup>5</sup>**



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



**University of Central Arkansas**  
**Bachelor of Science in Mathematics (Data Science)**  
**UCA Courses (60 credit hours)<sup>6</sup>**

|      |      |                                                                          | Semester | Hours | Grade |
|------|------|--------------------------------------------------------------------------|----------|-------|-------|
| MATH | 2341 | Introduction to Mathematical Computation                                 |          | 3     |       |
| MATH | 2471 | Calculus III                                                             |          | 4     |       |
| MATH | 3311 | Statistical Methods                                                      |          | 3     |       |
| MATH | 3320 | Linear Algebra (UD UCA Core: I)                                          |          | 3     |       |
| MATH | 3381 | Data Cleaning & Visualization                                            |          | 3     |       |
| MATH | 3392 | Multivariate Analysis                                                    |          | 3     |       |
| MATH | 4371 | Introduction to Probability (UD UCA Core: R)                             |          | 3     |       |
| MATH | 4373 | Regression Analysis                                                      |          | 3     |       |
| MATH | 4391 | Machine Learning (UD UCA Core: Z)                                        |          | 3     |       |
| MATH | 3391 | <b>Choose one:</b><br>Nonparametric Statistics                           |          | 3     |       |
| MATH | 4372 | Introduction to Statistical Inference                                    |          |       |       |
| MATH | 4374 | Introduction to Stochastic Processes                                     |          |       |       |
| MATH | 4381 | Special Problems in Mathematics                                          |          |       |       |
| MATH | 4392 | Time Series and Forecasting                                              |          |       |       |
| MATH | 3331 | <b>Choose one:</b><br>Ordinary Differential Equations I (UD UCA Core: C) |          | 3     |       |
| MATH | 3360 | Introduction to Rings & Fields                                           |          |       |       |
| MATH | 3362 | Introduction to Group Theory                                             |          |       |       |
| MATH | 3391 | Nonparametric Statistics                                                 |          |       |       |
| 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 | 4372 | Introduction to Statistical Inference                                    |          |       |       |
| MATH | 4374 | Introduction to Stochastic Processes                                     |          |       |       |
| MATH | 4375 | Introduction to Topology I                                               |          |       |       |
| MATH | 4381 | Special Problems in Mathematics                                          |          |       |       |
| MATH | 4385 | Complex Analysis                                                         |          |       |       |
| MATH | 4392 | Time Series and Forecasting                                              |          |       |       |
| CSCI |      | Upper Division Computer Science Minor Course                             |          | 3     |       |
| CSCI |      | Upper Division Computer Science Minor Course                             |          | 3     |       |
|      |      | Upper Division Core Requirement (UD UCA Core: C)                         |          | 3     |       |
|      |      | Upper Division Core Requirement (UD UCA Core: D)                         |          | 3     |       |
|      |      | General Electives                                                        |          | 11    |       |

**Total Hours: 120<sup>7</sup>**

<sup>1</sup> Please see your UA-PTC advisor for degree and graduation information.

<sup>2</sup> 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.

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

<sup>4</sup> This agreement recommends a minor in Computer Science.

<sup>5</sup> 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.

<sup>6</sup> In order to receive important communications about transferring to UCA, students are encouraged to create a UCA student account at [admissions.uca.edu/apply/](https://admissions.uca.edu/apply/). For more information about the 2+2 program, students may also send email inquiries to [ucatransfer@uca.edu](mailto:ucatransfer@uca.edu).

<sup>7</sup> 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).