



## FOUR YEAR ACADEMIC PLAN

### B.A. IN MATHEMATICAL SCIENCES (Data Analytics Option)

Minimum GPA Required for All Major Courses: 2.0

Overall Minimum GPA Required for Graduation: 2.0

Total Credits Required: 120 credits

Effective Date: **Fall 2024**

Student Name: \_\_\_\_\_ Student ID: \_\_\_\_\_

Study Year: \_\_\_\_\_ Study Term: \_\_\_\_\_

Students must fully comprehend the details outlined in this 4-year plan and consult with their academic advisors prior to selecting courses. Following each consultation regarding the course selection, both the student and the academic advisor are mandated to sign and date at the end of the plan, ensuring that each semester's decisions are officially recorded. Students are then required to submit a scanned copy of the signed 4-year plan to their advisor for archival purposes.

### Freshman Year

Fall Semester Year 1		Spring Semester Year 1	
GE 1000 Transition to Kean	1	MATH 2416 Calculus II	4
MATH 2415 Calc. I	4	MATH 2995 Matrix and Lin Alg.	3
ENG 1300 College Composition	6*	ENG 1430 College Comp. II	6*
ESL 0303	3**	ESL 0403	3**
ESL 0305	3**	ESL 0405	3**
Total Credits: <b>17</b>		Total Credits: <b>19</b>	

\*3 Credits for ENG\*1030, 3 Credits for MATH 1054 and 6 credits as lower-level free electives

\*\* Credits do not count toward graduation

### Sophomore Year

Fall Semester Year 2		Spring Semester Year 2	
MATH 3415 Calculus III	4	MATH 3544 Prob. and Stats	3
MATH 2526 Applied Statistics.	3	MATH 3710 Found of Data Analytics	3
GE 2024 Research and Tech	3	CPS 2231 Comp Org and Prog.	4
GE Soc Sci I	3	COMM 1402 Speech Comm.	3
CPS 1231 Fund of Comp Science	4	PHY 2091/2095 or CHEM*1083	4
Total Credits: <b>17</b>		Total Credits: <b>17</b>	

## Junior Year

<b>Fall Semester Year 3</b>	<b>Spring Semester Year 3</b>
MATH 3700 Big Data Computing      3	MATH 4720 Stat Data Mining      3
MATH Major Elective I      3	MATH Major Elective II      3
History 1062      3	GE Humanities I      3
Free Elective 1 (1000-2000)      3	GE Science (add'l)      3
Free Elective 2 (1000-2000)      3	Free Elective 3 (3000-4000)      3
ENG 2403 World Literature      3	
Total Credits: <b><u>18</u></b>	Total Credits: <b><u>15</u></b>

## Senior Year

<b>Fall Semester Year 4</b>	<b>Spring Semester Year 4</b>
MATH 4710 Data Visualization      3	MATH 3802 Independent Study in Math      2
MATH 4890 Senior Seminar      3	GE Humanities II      3
MATH Major Elective III      3	Free Elective 6 (3000-4000)      3
GE Soc Sci II      3	Free Elective 7 (3000-4000)      3
Free Elective 4 (3000-4000)      3	
Free Elective 5 (3000-4000)      3	
Total Credits: <b><u>18</u></b>	Total Credits: <b><u>11</u></b>

## **TOTAL CREDITS REQUIRED FOR GRADUATION: 120**

### **Some Math Major Electives**

- |   |  |
|---|--|
| 1. MATH 3225 Matrix & Linear Algebra II | 7. MATH 3690 Math Models for Eco & Finance |
| 2. MATH 3790 Applied Machine Learning   | 8. MATH 3560 Regression Analysis           |
| 3. MATH 3940 Numerical Analysis         | 9. MATH 4805 Operation Research            |
| 4. MATH 4451 Real Analysis              | 10. MATH 3560 Applied Regression Analysis  |
| 5. MATH 3640 Financial Mathematics      | 11. MATH 3570 Multivariate Analysis        |
| 6. MATH 3455 Differential Equations     | 12. MATH 4465 Complex Variables            |

Recommended Minor in CS: please refer to the catalog above. At WKU, students are required to earn a grade of C or better in CPS 1231, CPS 2231, CPS 2232, MATH 2110, and three other CPS courses (9 credits) level 3000 or above.

**Note: In order to graduate, students also need to meet all the Chinese curriculum and ESL requirements.**

Student's Signature: \_\_\_\_\_ Advisor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_