Grand Valley State University — College of Computing

Bachelor of Science (B.S.)
Data Science & Analytics
MTH 124 Start
Secondary Admission Required

1st Year

Fall		Winter		Spring/Summer
MTH 124: Precalculus	5	*CIS 161: Computing for Data & Science	3	
*STA 215: Intro Applied Statistics	3	*STA 216: Intermediate Applied Statistics	3	
WRT 150: Strategies in Writing **or** WRT 120 and WRT 130	4	MTH 201: Calculus 1	4	
		General Education	3	
General Education	3	General Education	3	
Total	**15**	**Total**	**16**	

2nd Year

Fall		Winter		Spring/Summer
*CIS 164: Computing for Data & Science 2	3	STA 311: Intro to Survey Sampling	3	
*MTH 204: Linear Algebra 1	3	MTH 205: Linear Algebra 2	3	
CIS 263: Data Structures & Algorithms	3	COM 203: Argument & Analysis (SWS)	3	
General Education	3	*DSA 220: Intro to Data Science & Analytics	3	
General Education	3	General Education	3	
		APPLY FOR SECONDARY ADMISSION AFTER GRADES ARE POSTED IN BANNER		
Total	**15**	**Total**	**16**	

3rd Year ~ Admission Required

Fall		Winter		Spring/Summer	
DSA 390: Professionalism in Data Science	3	CIS 335: Data Mining	3	DSA 490: Internship	2-5
CIS 360: Information Management	3	CIS 358: Information Assurance	3		
STA 321: Applied Regression Analysis	3	CIS 320: Information Visualization	3		
Application Domain Course	3	STA Elective	3		
General Education	3	General Education	3		
Total	**15**	**Total**	**15**	**Total**	**2-5**

4th Year ~ Admission Required

Fall		Winter		Spring/Summer
STA 418: Computing & Graphics with R	3	DSA 495: Data Science Capstone	3	
STA 426: Multivariate Data Analysis	3	STA Elective	3	
CIS Elective	3	CIS 378: Applied Machine Learning	3	
General Education (consider lab science)	4	Application Domain Course	3	
		Free Elective	3	
Total	**13**	**Total**	**15**	

- This is a suggested curriculum guide that might not be applicable to every student
- Technical Core courses are required for secondary admission and are designated by an asterisk (*) on this guide
- Student must have a **minimum of 120 credits** to graduate, with **58 of the 120 credits** being from a senior level institution and the **final 30 of the 120 credits** completed at GVSU

6/17/2024

<table>
<tr><td colspan="3">Data Science & Analytics Technical Core Requirements</td></tr>
<tr><td>CIS 161</td><td>CIS 164</td><td>MTH 204</td></tr>
<tr><td>STA 215</td><td>STA 216</td><td>DSA 220</td></tr>
<tr><td colspan="3">It is important to apply for secondary admission AFTER your grades for your ALL of your Technical Core Requirements are posted in Banner.

You will not be able to register for any upper division course work that requires secondary admission until you've been admitted into your major. If you delay this process, it could impact your graduation timeline.

See Secondary Admission Requirements below.</td></tr>
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<tr><td colspan="2">General Education Requirements</td></tr>
<tr><td>WRT 150: Strategies in Writing (grade of "C" or higher required)
   or WRT 120 and WRT 130 (grade of "C" or higher required in both)</td><td>Life Sciences</td></tr>
<tr><td>Physical Sciences</td><td>Philosophy and Literature</td></tr>
<tr><td>Arts</td><td>Mathematical Sciences (MTH 201)</td></tr>
<tr><td>Social Behavioral Sciences</td><td>Social Behavioral Sciences</td></tr>
<tr><td>Historical Analysis</td><td>U.S. Diversity</td></tr>
<tr><td>Global Perspectives</td><td>2 Supplemental Writing Skills Courses (prerequisite: WRT 130 or WRT 150)</td></tr>
<tr><td>2 Issues Courses (prerequisite: must have 55+ credits)</td><td></td></tr>
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Secondary Admission Requirements:

Detailed application and admission requirements available at <https://www.gvsu.edu/computing/secondary-admission-40.htm>

- ✓ Overall GPA of 2.5 or above in all Grand Valley State University course work.
- ✓ Completion of each course in the Technical Core with a grade of C (2.0) or above. Technical Core courses are designated by an asterisk (*) on this guide.
- ✓ GPA of 2.5 or above in the Computer Science Technical Core course work.
- ✓ A minimum of 9 credits of foundation courses must be taken at GVSU.

Major Notes:

1.) DSA 490 can be taken as 2-5 credits. Students will work with the Computing Internship Coordinator to determine the best amount of credits for them.
2.) It is highly encouraged for students to "double dip" their general education requirements when possible.
   a. Consider taking a course that fulfills the U.S. Diversity category and one Social and Behavioral Science course.
   b. Consider taking a course that fulfills the Global Perspectives category and one Issues course.
3.) CIS Elective Options (must choose 1): CIS 331, CIS 333, CIS 353, CIS 365, CIS 368
4.) STA Elective Options (must choose 2): STA 310, STA 310, STA 314, STA 315, STA 318, STA 421
5.) Application Domain Course Options (must choose 2): ECO 300, ECO 385, ECO 400, GPY 307, GPY 365, GPY 385, GPY 407, GPY 470, BIO 375, CMB 451, CMB 452, CMB 460, ANT 420, ANT 305, PLS 300, PLS 350
   a. ECO/GPY 385 is a course that fulfills the Application Domain course requirement as well as fulfills an Issues requirement.
6.) COM 203 fulfills one of the two Supplemental Writing Skills (SWS) requirements.
7.) CIS 358 and CIS 320 fulfill one of the two issues course requirements. The other issues course must be an non-CIS course from another discipline (such as ECO/GPY 385).
8.) Free electives refer to any courses that students choose to take in order to meet the 120 credit requirement.