**Administrator Decision Tree**

# 1. SCHEDULE CAPACITY

**Guiding Question:** Which math/computer science courses do we currently offer? Who teaches them? Which are essential? Are there any currently offered courses that could be replaced?

**Analyzing Question:** How many new courses could we fit into our schedule?

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| **Course** | **Number of Sections** | **Teacher(s)** | **How many sections are essential to keep?** |
| Algebra 1/Math 1 |  |  |  |
| Geometry/Math 2 |  |  |  |
| Algebra 2/Math 3 |  |  |  |
| Pre-Calculus |  |  |  |
| Calculus |  |  |  |
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|  | **Total sections:** |  | **Total Essential Sections:** |
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# 2. TEACHER CAPACITY

**Guiding Questions:** How many prep periods does each teacher have? Which teachers are willing/able to teach any new courses? If so, which new courses do they prefer to teach.

**Analyzing Question:** Which teachers are most likely able/willing to teach new courses?

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| **Teacher Name** | **Courses Taught** | **Number of Prep Periods** | **Algebra 2 Equivalent 1st Preferred Course** | **Algebra 2 Equivalent 2nd Preferred Course** | **Algebra 2 Equivalent 3rd Preferred Course** | **Unwilling to Teach** |
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# 3. Regional Needs

**Guiding Questions:** What industries does this region feed into and what postsecondary education do students need? Use the In-Demand Jobs Listing: <https://topjobs.ohio.gov/wps/portal/gov/indemand/list>

* Sort by your region of the state using the drop-down tool.
* Download a comma-separated values (CSV) file using the button in the lower right-hand corner.
* Highlight table and Sort by 08. Growth (Column H).
* Delete columns A (01), D (04) and E (05).
* Delete rows from 26 and beyond.
* Copy lines from A2 to A26 from the CSV into Column A "In-Demand Jobs" below.
* Copy lines from B2 to B26 from the CSV into Column B "Education Requirement" below.
* Copy lines from C2 to C26 from the CSV into Column C "OhioMeansJobs Career Cluster" below.
* You may want to sort by employment and opening and add any jobs that weren't on the growth list.
* Highlight the table, and sort by Education Requirement (Column B). Mark that your data has headers.
* For jobs that require some level of postsecondary instruction, use the Student Decision Tree\_Part 3 on the Department’s [Math Pathways Toolkits webpage](https://education.ohio.gov/Topics/Learning-in-Ohio/Mathematics/Resources-for-Mathematics/Math-Pathways/Higher-Ed-Entry-Level-Math-Pathways-Course-Descrip) to find the recommended math course for each in-demand job.

**Analyzing Question: Which Pathways Math Course appears most often for your region?** **Highlight the top five career clusters and their Algebra 2 Equivalent aligned courses.**

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| **In-Demand Jobs** | **Education Requirement** | **OhioMeansJobs Career Cluster** | **Ohio Department of Higher Education Career Cluster** | **Recommended Math Course** |
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# 4. Student Course Requests

**Guiding Question:** Which third- and fourth-year math options did your students request?

**Analyzing Question**: What are the top two student math course requests?

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| **Third- and Fourth-Year Student Math Course Requests** | **Percent of Requests** |
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# 5. Student Interests

A sample student survey is in the toolkit. Conduct a student survey to find out the following:

1. **Guiding Questions:** What percentage of my students pursue four-year degrees from Ohio public universities? Private universities? Two-year associate degrees? Enter the military? Enter directly into the workforce upon completing high school?

**Analyzing Question**: What percentage of students plan to pursue postsecondary degrees?

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| --- | --- |
| **Student Paths** | **Percent** |
| Four-year degree from an Ohio public institution |  |
| Four-year degree from a private or out-of-state institution |  |
| Two-year degree |  |
| Apprenticeship |  |
| Enter the military directly upon graduation |  |
| Enter into career directly upon graduation |  |

1. **Guiding Question:** What percentage of students are interested in college majors that require calculus?

**Analyzing Question:** How many sections of Algebra 2 are needed?

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| --- | --- |
| **College Majors Requiring Calculus** | **Percent** |
| Interested in a calculus-based career |  |
| Not interested in a calculus-based career |  |

1. **Guiding Question:** What careers are your students interested in?

**Analyzing Question:** What are the top five career clusters your students are interested in?

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| --- | --- |
| **Career Cluster** | **Percent Interested** |
| Agriculture & Natural Resources |  |
| Anthropology & Geography |  |
| Art, Drama & Music |  |
| Business & Finance |  |
| Computer Science, Information Technology & Programming |  |
| Construction |  |
| Economics |  |
| Education (math or upper-level science teacher) |  |
| Education (non-math or upper-level science teacher) |  |
| Engineering, Biology, Chemistry, Geology, Physics & Pre-Med |  |
| English, Communications & Journalism |  |
| Food & Beverage |  |
| Government, History & Public Administration |  |
| Hospitality & Tourism |  |
| Law, Public Safety, Corrections & Security |  |
| Marketing, Sales & Advertising |  |
| Nursing, Dietetics & Exercise Science |  |

1. **Guiding Question:** Which pathways courses are students interested in taking?

**Analyzing Question:** What are the top two courses students are interested in taking?

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| --- | --- |
| **Course** | **Percent Interested** |
| Algebra 2/Precalculus/Calculus |  |
| Quantitative Reasoning |  |
| Data Science Foundations |  |
| Statistics and Probability |  |
| Discrete Math/Computer Science |  |

# Summarize the Data

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| **1. Schedule Capacity**  Number of new courses we can offer | **2. Teacher Capacity**  Top teacher-preferred courses (ranked) | **3. Regional Needs**  Top five regional in-demand jobs with their Algebra 2 Equivalent courses (ranked) | **4. Student Course Requests** Top two student math course requests | **5a. Student Survey: Postsecondary Plans**  Percent of students who plan to pursue postsecondary degrees | **5b. Student Survey: Calculus-based Majors**  How many sections of Algebra 2 are needed? | **5c. Student Survey: Career Interests** Top five career clusters and Algebra 2 Equivalent aligned courses (ranked) | **5d. Student Survey: Student Course Interest**  Top two preferred student courses  (ranked) |
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**Analyze the Data: Now that you have summarized the data, analyze the results. Districts may determine the weight of each category and analyze the data.**