



Course Title: Survey of Mathematics

Content Area: Mathematics

Grade Level: 11-12

Scope and Sequence

| Grade Level: 11-12 | | | Content Area: Math | | | |
|-------------------------------|----------------|----------------|---|--|--|---|
| Unit or Topic | Standards | Length of Time | Key Content | Assessment Tools | Scaffolding Strategies (Interventions, Special Education) | Resources & Materials |
| Reasoning and Problem Solving | CC.2.1.HS.F.3 | 3 weeks | -Identify inductive and deductive reasoning -Formulate conjectures -State the difference between conjectures and theorems -Formulate problem solving strategies | In class exams, homework sets, group projects, computer algebra system | Students are allowed to make test corrections. Assessments will be modified in line with IEP's. | All content is gathered from various online or hard-copy courses. Posted in Google Classroom. |
| Set Theory | CC.2.2.HS.C.1 | 3 weeks | -Use set builder notation -Subsets -Venn diagrams -Counting problems | In class exams, homework sets, group projects, computer algebra system | Students are allowed to make test corrections. Assessments will be modified in line with IEP's. Calculators. | All content is gathered from various online or hard-copy courses. Posted in Google Classroom. |
| Logic | CC.2.2.HS.D.10 | 3 weeks | -Identify well-defined statements and write negations -Compound statements and logic notation -Truth tables Equivalency of compound statements -Valid and invalid arguments | In class exams, homework sets, group projects, computer algebra system | Students are allowed to make test corrections. Assessments will be modified in line with IEP's. Calculators. | All content is gathered from various online or hard-copy courses. Posted in Google Classroom. |



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| | | | -Euler diagrams | | | |
| Number Theory (Counting Numbers) | CC.2.2.4.A.2 CC.2.1.HS.F.2 | 3 weeks | -Identify counting numbers -Identify Prime or composite numbers -Factor composite numbers -Identify theorems and conjectures -LCM's and GCF's -Fibonacci Sequence -Examples of Fibonacci numbers and the Golden Ratio | In class exams, homework sets, group projects, computer algebra system | Students are allowed to make test corrections. Assessments will be modified in line with IEP's. Calculators. | All content is gathered from various online or hard-copy courses. Posted in Google Classroom. |
| The Real Number System | CC.2.1.HS.F.1 CC.2.1.HS.F.2 | 2 weeks | -Identify and classify real numbers -Simplify numerical expressions -Rational and irrational numbers -Fractions to decimals and vice-versa -Decimals and percent | In class exams, homework sets, group projects, computer algebra system | Students are allowed to make test corrections. Assessments will be modified in line with IEP's. Calculators. | All content is gathered from various online or hard-copy courses. Posted in Google Classroom. |
| Consumer Math | 15.6.8.J | 3 weeks | -Compound interest Total interest and monthly payments -Unearned interest -Monthly payments and mortgages | In class exams, homework sets, group projects, computer algebra system | Students are allowed to make test corrections. Assessments will be modified in line with IEP's. Calculators. | All content is gathered from various online or hard-copy courses. Posted in Google Classroom. |



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| | | | -Pros and cons of investments | | | |
| Management Science | CC.2.2.8.B.3 | 2 weeks | -Euler circuits -Hamiltonian circuits -Minimum cost spanning trees -Task schedule problems -Linear programming | In class exams, homework sets, group projects, computer algebra system | Students are allowed to make test corrections. Assessments will be modified in line with IEP's. Calculators. | All content is gathered from various online or hard-copy courses. Posted in Google Classroom. |
| Probability and Statistics | CC.2.4.HS.B.1 CC.2.4.HS.B.2 CC.2.4.HS.B.3 CC.2.4.HS.B.4 CC.2.4.HS.B.5 CC.2.4.HS.B.6 CC.2.4.HS.B.7 | 4 weeks | -Sampling methods -Evaluate Distribution -Probability -Random phenomenon -Normal distributions and the central limit theorem -Population proportion and confidence intervals | In class exams, homework sets, group projects, computer algebra system | Students are allowed to make test corrections. Assessments will be modified in line with IEP's. Calculators. | All content is gathered from various online or hard-copy courses. Posted in Google Classroom. |
| Social Choice and Decision Making | CC.2.4.7.B.1 5.3.3.E | 2 weeks | -Outcomes of elections -Voting paradox -Weighted voting systems -Fair division -Hamilton Method -Game Theory | In class exams, homework sets, group projects, computer algebra system | Students are allowed to make test corrections. Assessments will be modified in line with IEP's. | All content is gathered from various online or hard-copy courses. Posted in Google Classroom. |
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