# Washington Youth Challenge Academy

# COURSE DESCRIPTIONS

## Session 2023-02

June 1, 2023

| State Course ID | CTE CIP Code | WYCA Course ID | Title | Description | Cr. | Type B = CADR | Teacher |
|---|---|---|---|---|---|---|---|
| 01992 | N/A | ENG 241 | English Proficiency Development | The English proficiency development course is designed to assist students in acquiring the skills necessary to pass state and national proficiency examinations. These skills are aligned with the Grade Level Standards in Reading and Writing for the State of Washington. | 1.0 | B | Buium |
| 21009 | 150406 | CTE 430 | Robotics Foundations | Robotics Foundations is an interdisciplinary course that incorporates elements of science, math and technology, design, teamwork and competition. Students learn how to take an initial idea through the design, development, construction, and evaluation cycle. Specific skills are gained in brainstorming, teamwork, and teambuilding, computer design, prototyping, construction, and self-evaluation. Projects may include robotics arms, computer/robotic programming, specific task-oriented robots, and walking robots. Projects/competition affords students the opportunity to test their creativity, knowledge, and skill. | 1.0 | | Morales |
| 03210 | N/A | SCI 165 | Physical Science and Engineering with lab | This course is focused on the principles of physics, Earth and space science, and engineering. It is designed to be a hands-on, project-based class and will prepare students for upper-level science courses, and relevant science and engineering fields. The class will prepare students for the Washington Comprehensive Assessment of Science (WCAS) and meet the life science requirements for the Next Generation Science Standards. | 1.0 | B | Lundberg |

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|---|---|---|---|---|---|---|---|
| 04305 | N/A | SST 330 | Social Studies | In this course, students study and compare the different economic and governmental systems of the world, as well as take an in-depth look at how the U.S. economy and government works. Some of the topics covered include the law of supply and demand; income inequality, unemployment and poverty; labor unions and specialization of labor, and different minority populations. Students will explore these topics through online research assignments, individual and group research, and traditional lessons. The course includes a Civics component. Students participate in a mock election, take the U.S. Citizenship Test, and register for selective service or to vote (if eligible). | 1.0 | B | Field |
| 19262 | N/A | JLS 440 | Personal Finance | This course emphasizes the fundamental skills one needs to be financially fit. Students learn how to make money work for them. Students complete the class with an individual financial plan for savings, investing, avoiding debt, understanding credit, budgeting, assessing insurance needs, and general money management skills. *(Note: this course does not qualify as a math credit.)* | 0.5 | | Snyder |
| 22151 | N/A | JLS 235 | Career Exploration | This course helps students identify and evaluate personal goals, priorities, aptitudes, and interests with the goal of helping them make informed decisions about their careers. The course exposes students to various sources of information on career and training options and assists them in developing job search and employability skills. | 0.5 | | Snyder |

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| 22104 | N/A | JLS 421 | Community Service | Provides students with the opportunity to volunteer their time, energy, and talents to serve a community project or organizations. Students use volunteer experiences to learn how to solve problems, make decisions, and communicate effectively. | 0.5 | | Lundberg |
| 08057 | N/A | HED 425 | Health and Life Management | The Health and Life Management course focuses on consumer education and personal health topics (such as nutrition, stress management, drug/alcohol abuse prevention, and disease prevention). Course objectives include helping students develop decision-making, communication, interpersonal, and coping skills and strategies. | 0.5 | | Neyman |
| 08005 | N/A | FIT 210 | Personal Fitness | This class introduces students to the components of fitness and conditioning, principles of weight training, and personal goal setting. Students engage in conditioning activities that develop muscular strength, flexibility, and cardiovascular fitness. Personal fitness levels are regularly assessed by means of the BMI (Body Mass Index) and President's Personal Fitness Test (PPFT). | 1.0 | | Neyman |

*Note: Cadets are enrolled in up to 1.0 credit of math per WYCA session.*

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|---|---|---|---|---|---|---|---|
| 02051 | N/A | MAT 131 | Pre-Algebra Semester 1 | The Pre-Algebra course increases students' foundational mathematics skills and prepares them for Algebra I by covering a variety of topics, such as properties of rational numbers (i.e., number theory), ratio, proportion, estimation, exponents and radicals, the rectangular coordinate system, sets and logic, formulas, and solving first-degree equations and inequalities. | 0.5 | | M. Zmolek |
| 02051 | N/A | MAT 132 | Pre-Algebra Semester 2 | The Pre-Algebra course increases students' foundational mathematics skills and prepares them for Algebra I by covering a variety of topics, such as properties of rational numbers (i.e., number theory), ratio, proportion, estimation, exponents and radicals, the rectangular coordinate system, sets and logic, formulas, and solving first-degree equations and inequalities. | 0.5 | | M. Zmolek |
| 02074 | N/A | MAT 220 | Principles of Algebra and Geometry Semester 1 | The Principles of Algebra and Geometry course combines the study of some pre-algebra and algebra topics with introductory geometry topics. The course includes the study of formulas, algebraic expressions, first-degree equations and inequalities, the rectangular coordinate system, area, perimeter, and volume of geometric figures, and properties of triangles and circles. | 0.5 | | M. Zmolek |
| 02074 | N/A | MAT 221 | Principles of Algebra and Geometry Semester 2 | The Principles of Algebra and Geometry course combines the study of some pre-algebra and algebra topics with introductory geometry topics. The course includes the study of formulas, algebraic expressions, first-degree equations and inequalities, the rectangular coordinate system, area, perimeter, and volume of geometric figures, and properties of triangles and circles. | 0.5 | | M. Zmolek |

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|---|---|---|---|---|---|---|---|
| 02137 | N/A | MAT 302 | Mathematical Modeling Semester 1 | The Mathematical Modeling course builds upon students' knowledge of algebra and geometry to analyze information using statistical methods and probability, simulate change using mathematical relationships and spatial and geometric modeling, and critically assess and make decisions or solve problems on quantitative data and logical reasoning. | 0.5 | (B) | M. Zmolek |
| 02137 | N/A | MAT 303 | Mathematical Modeling Semester 2 | The Mathematical Modeling course builds upon students' knowledge of algebra and geometry to analyze information using statistical methods and probability, simulate change using mathematical relationships and spatial and geometric modeling, and critically assess and make decisions or solve problems on quantitative data and logical reasoning. | 0.5 | (B) | M. Zmolek |
| 02110 | N/A | MAT 430 | Pre-Calculus Semester 1 - Independent Study | The Pre-Calculus course combines the study of Trigonometry, Elementary Functions, Analytic Geometry, and Mathematic Analysis topics as preparation for calculus. Topics typically include the study of complex numbers; polynomial, logarithmic, exponential, rational, right trigonometric, and circular functions, and their relations, inverses and graphs; trigonometric identities and equations; solutions of right and oblique triangles; vectors; the polar coordinate system; conic sections; Boolean algebra and symbolic logic; mathematical induction; matrix algebra; sequences and series; and limits and continuity. | 0.5 | (B) | M. Zmolek |

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|---|---|---|---|---|---|---|---|
| 02110 | N/A | MAT 431 | Pre-Calculus Semester 2 – Independent Study | The Pre-Calculus course combines the study of Trigonometry, Elementary Functions, Analytic Geometry, and Mathematic Analysis topics as preparation for calculus. Topics typically include the study of complex numbers; polynomial, logarithmic, exponential, rational, right trigonometric, and circular functions, and their relations, inverses and graphs; trigonometric identities and equations; solutions of right and oblique triangles; vectors; the polar coordinate system; conic sections; Boolean algebra and symbolic logic; mathematical induction; matrix algebra; sequences and series; and limits and continuity. | 0.5 | (B) | M. Zmolek |
| 02121 | N/A | MAT 440 | Calculus Semester 1- Independent Study | The calculus course includes the study of derivatives, differentiation, integration, the definite and indefinite integral, and applications of calculus. Typically, students have previously attained knowledge of pre-calculus topics (some combination of trigonometry, elementary functions, analytic geometry, and mathematic analysis). | 0.5 | (B) | M. Zmolek |
| 02121 | N/A | MAT 441 | Calculus Semester 2 – Independent Study | The calculus course includes the study of derivatives, differentiation, integration, the definite and indefinite integral, and applications of calculus. Typically, students have previously attained knowledge of pre-calculus topics (some combination of trigonometry, elementary functions, analytic geometry, and mathematic analysis). | 0.5 | (B) | M. Zmolek |

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| 02201 | N/A | MAT 530 | Probability and Statistics Semester 1 – Independent Study | The Probability and Statistics course introduces the study of likely events and the analysis, interpretation, and presentation of quantitative data. Course topics generally include basic probability and statistics: discrete probability theory, odds and probabilities, probability trees, populations and samples, frequency tables, measures of central tendency, and presentation of data (including graphs). Course topics may also include normal distribution and measures of variability. | 0.5 | (B) | M. Zmolek |
| 02201 | N/A | MAT 531 | Probability and Statistics Semester 2 – Independent Study | The Probability and Statistics course introduces the study of likely events and the analysis, interpretation, and presentation of quantitative data. Course topics generally include basic probability and statistics: discrete probability theory, odds and probabilities, probability trees, populations and samples, frequency tables, measures of central tendency, and presentation of data (including graphs). Course topics may also include normal distribution and measures of variability. | 0.5 | (B) | M. Zmolek |

ADDITIONAL INFORMATION

Washington Youth Challenge Academy classes are standards-based and approved by the Office of the Superintendent of Public Instruction (OSPI).

CEDARS District Code 34979: Washington Military Department
CEDARS School Code 5302: Washington Youth Challenge Academy

- The core classes align to Washington State standards:
  - English and Math courses are aligned to the common core standards.
  - Science is aligned both to Washington State standards and Next Generation Science Standards (NGSS).

- The Washington Youth Challenge Academy has received CTE course approvals from OSPI for the Career and Technical Education courses that carry a CIP code.

- The High School and Beyond Plan is a document that students work on throughout their high school experience. WYCA awards a High School and Beyond Plan completed designation on the final grade report to senior-level students that meet a culminating standard on this graduation requirement and have otherwise met all requirements for graduation.

- ASVAB Test. All cadets take the Armed Services Vocational Aptitude Battery (ASVAB).

- Avant STAMP 4S. Bilingual students may elect to take the Avant STAMP 4S World Language competency assessment. Award of high school credits (up to four credits possible) and/or award of the seal of biliteracy are evaluated and transcripted at the student's next residential school.

For questions or further information about the course offerings,
please contact the Washington Youth Challenge Academy Academic Department
at (360) 473-2602

June 1, 2023