



United States Academic Decathlon®

TECHNOLOGY & HUMANITY

CURRICULUM OVERVIEW

2023-2024

The vision of the United States Academic Decathlon® is to provide students the opportunity to excel academically through team competition.
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CORPORATE SPONSORS

We thank our corporate sponsors for their support!



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VISION

The vision of the U.S. Academic Decathlon® is to provide all students the opportunity to excel academically through team competition.

MISSION

The mission of the U.S. Academic Decathlon® is to promote learning and academic excellence among students of varying achievement levels by developing and providing multidisciplinary academic competitions using U.S. Academic Decathlon®-based curricula.

CORE VALUES

As a premier national scholastic competition for high school students, the United States Academic Decathlon® believes in:

The academic growth of students

Challenging multidisciplinary learning

Teamwork as a means to achieve self-knowledge and life skills

Providing equal opportunities for students of different achievement levels

The importance of inclusivity and diversity to learning and the human experience

High standards of honesty and integrity

Transparency in our relations and interactions with all of our stakeholders

Excellence in our programs, services and activities

Respect for diverse points of view

WHAT IS THE UNITED STATES ACADEMIC DECATHLON®?

OVERVIEW

The United States Academic Decathlon®, the premier national scholastic competition for high school students, was created to provide opportunities for students to experience the challenges of rigorous team and individual academic competition. Each student competes in ten events: Art, Economics, Essay, Interview, Literature, Mathematics, Music, Science, Social Science, and Speech. Students compose an essay based on a prompt whose central theme incorporates information relating to the current curriculum. Students also perform a prepared speech and impromptu speech and participate in an interview before a panel of volunteer judges from the local community.

The culmination of the competition is the exciting Super Quiz™ relay in which students have the opportunity to demonstrate their mastery of the broad range of the U.S. Academic Decathlon's interdisciplinary curriculum by answering questions from seven different subject areas: art, economics, literature, mathematics, music, science, and social science. The Super Quiz is the only part of the actual testing that is open to the public, and it is inevitably one of the most memorable and exciting parts of the Academic Decathlon competition.

Gold, silver, and bronze medals are awarded for individual events and total scores. Overall individual winners are recognized as are champion teams. The broad base of awards allows for major recognition of academic accomplishment. Teams advance through local, regional, and state levels of competition. The state champions compete at the national finals. The 2024 Academic Decathlon National Finals will take place on April 25—April 27, in Pittsburgh, Pennsylvania.

PROGRAM DESCRIPTION

The United States Academic Decathlon emphasizes the personal and academic growth of each student who, by meeting the challenges with honesty and integrity, can reap the rewards of greater self-knowledge and self-confidence for the future.

The ten-event academic program strives to foster a greater respect for knowledge, to promote wholesome inter-school academic competition, and to further develop student communication skills. A unique aspect of the U.S. Academic Decathlon is that it is designed to include students from all academic abilities and achievement levels. Each nine-member team consists of three Honor students (3.80 – 4.00 GPA), three Scholastic students (3.20 – 3.799 GPA), and three Varsity students (0.00 – 3.199 GPA). Each team member competes in all ten events against other students in their GPA division. Overall team scores are calculated using the top two individual scores from each division.

HISTORY

The U.S. Academic Decathlon was first created by Dr. Robert Peterson, former Superintendent of Schools in Orange County, California. Firmly believing that everyone's learning potential can be maximized through competitive challenge, Dr. Peterson set in motion the contest that has since come to be recognized as the most prestigious high school academic team competition in the United States. The program spread rapidly due to the success and excitement it engendered. The United States Academic Decathlon was founded in 1981.

THE UNITED STATES ACADEMIC DECATHLON® AND CURRICULUM AND CONTENT STANDARDS

OVERVIEW

The United States Academic Decathlon's curriculum is an interdisciplinary curriculum in which a selected theme is integrated across six different subject areas: art, economics, literature, music, science, and social science. Students also study mathematics and participate in essay-writing, speech, and interview events. The theme for the 2023–2024 U.S. Academic Decathlon® (USAD) curriculum is *Technology and Humanity*. While in most subjects the majority of the topics relate to the overall curricular theme, some topics that cover fundamentals may also be included to encourage a thorough understanding of the subject area as a whole. The USAD mathematics curriculum is unrelated to the theme and focuses on standard high school mathematics topics.

This document provides a summary of the Common Core Standards for high school Mathematics and Reading that are addressed in USAD's 2023–2024 curriculum as well as the national content standards met by USAD's 2023–2024 curriculum.

THE UNITED STATES ACADEMIC DECATHLON'S CURRICULUM AND THE COMMON CORE STANDARDS

Standards Background

The Common Core State Standards Initiative is a state-led effort to establish a common set of educational standards for English language arts and mathematics. The standards aim to ensure that students graduating from high school are prepared to attend college or enter the workforce. The Common Core Standards were developed by states and content experts under the guidance of governors and state education chiefs, and they have been adopted by forty-one states, the District of Columbia, four territories, and the Department of Defense Education Activity (DoDEA).

The United States Academic Decathlon® and the Common Core Standards for High School Mathematics

The Common Core High School Mathematics Standards consist of six broad categories. The U.S. Academic Decathlon's 2023–2024 mathematics curriculum addresses aspects of all six categories: Number and Quantity, Algebra, Functions, Modeling, Geometry and Statistics and Probability.

Mathematical Practice Standards Addressed

In addition to the content standards, the Common Core High School Mathematics standards emphasize eight practice standards. These standards are meant to address the manner in which students approach and reason during their learning of mathematics. USAD's 2023–24 Mathematics Curriculum addresses seven of these eight practice standards:

- *CCSS.Math.Practice.MP1: Make sense of problems and persevere in solving them*
- *CCSS.Math.Practice.MP2: Reason abstractly and quantitatively*
- *CCSS.Math.Practice.MP4: Model with mathematics*
- *CCSS.Math.Practice.MP5: Use appropriate tools strategically*
- *CCSS.Math.Practice.MP6: Attend to precision*
- *CCSS.Math.Practice.MP7: Look for and make use of structure*
- *CCSS.Math.Practice.MP8: Look for and express regularity in repeated reasoning*

The United States Academic Decathlon and the Common Core Reading Standards for Literature

USAD's 2023–24 literature curriculum in concert with other Academic Decathlon subject areas addresses aspects of all ten of the Common Core College and Career Readiness Anchor Standards for Reading for students in grades K–12. USAD's 2023–24 literature curriculum in concert with other Academic Decathlon subject areas addresses aspects of all ten Common Core Reading Standards for Literature for students in grades 9–10. USAD's 2023–24 literature curriculum in concert with other Academic Decathlon subject areas addresses aspects of seven Common Core Reading Standards for Literature for students in grades 11–12.

THE UNITED STATES ACADEMIC DECATHLON CURRICULUM AND NATIONAL CONTENT STANDARDS

USAD's 2023–2024 curriculum addresses aspects of the following:

- *All twenty of the Voluntary National Content Standards in Economics*
- *Eleven of the twelve Curriculum and Content Area Standards for English Language Arts*
- *All five content areas of the high school mathematics curriculum delineated by the National Council of Teachers of Mathematics (NCTM) and provides students with opportunities to utilize all four reasoning habits delineated by the NCTM*
- *Four National Core Arts Standards for Music*
- *Four National Core Arts Standards for Visual Arts*
- *Two Life Science Disciplinary Core Ideas for Grades 9–12 and five of seven crosscutting concepts delineated by the Next Generation Science Standards*
- *Seven of ten overarching curricular themes outlined by the National Council for Social Studies (NCSS), five historical eras of focus delineated by the National Content Standards for U.S. History and two historical eras of focus delineated by the National Content Standards for World History*

CURRICULUM MATERIALS

U.S. ACADEMIC DECATHLON STUDY GUIDE:

Summarizes the curriculum for the entire year. Includes detailed outlines for Art, Economics, Literature, Mathematics, Music, Science, and Social Science. Also includes rules and guidelines for the Speech, Interview, and Essay events. Available as PDF for download or as an eBook. *Available May 15*

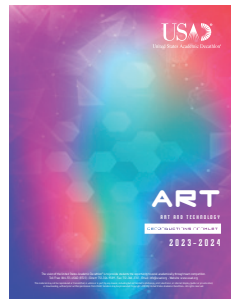


PRACTICE TEST BOOKLET:

The PTB is the most important coaching tool for understanding Academic Decathlon tests. Written by the official USAD test writers in each subject area. Contains eight tests, sample essay prompts, and speech and interview rules and rubrics. The PTB may be reproduced at the school level only. Includes mp3 file for music questions based on listening excerpts and PowerPoint® Slideshows for art questions based on artwork images and the Super Quiz™ relay. *Available May 15*

ART REPRODUCTIONS BOOKLET:

Contains full-color reproductions of the 18 selected artworks for this year's art curriculum. Available as PDF for download or as an eBook. *Available May 15*



RESOURCE GUIDES:

Resource Guides will be provided in Art, Economics, Literature, Mathematics, Music, Science, and Social Science. These Resource Guides will provide teams with a thorough review and academic treatment of all the topics noted in the subject area outlines for these subjects. All Academic Decathlon competition test items will be derived from the information and concepts presented in the Resource Guides, as well as the selected literature, artworks, and musical works. The Resource Guides offer an essential resource that will assist students in their mastery of the topics and aid in their preparation for the competition tests. Available as PDF for download or as an eBook. *Available May 15*

CURRICULUM PACKAGE:

- ★ Academic Decathlon® Study Guides
- ★ Art, Economics, Literature, Music, Science, and Social Science Resource Guides
- ★ Mathematics Resource Guides and Mathematics Instructor's Manual
- ★ Art Reproductions Booklet
- ★ Practice Test Booklet



STUDENT STUDY AIDS

STUDENT EXERCISE BOOKS:

Available in Art, Economics, Literature, Mathematics, Music, Science, and Social Science, the Student Exercise Books provide a student-friendly synthesis of the material presented in the Resource Guides and offer students a chance to test and reinforce their knowledge of the curriculum through a variety of exercises and activities. The Student Exercise Books will include section overviews as well as short quizzes, true/false questions, fill-in-the-blank items, etc., to assist students in their mastery of the curriculum. Available as PDF for download.

Available June 15



ESSAY EXAM BOOKLET:

Contains 20 essay tests with a total of 60 essay prompts, which focus on the following six subject areas: art, economics, literature, music, science, and social science. The essay rubric used at the National Competition is included in the booklet. Great for essay writing practice.

Available June 15

LITERATURE NOVEL QUIZZES:

Test your knowledge of Ursula K. Le Guin's *The Lathe of Heaven*. Quizzes will include a combination of fill-in-the-blank items, short question and answer format, multiple-choice items, and matching to help students to master the chapters in this year's selected novel.

Available June 15

IMPROMPTU TOPIC BOOKLET:

Contains 150 impromptu speech topics, including a variety of sample approaches that may be encountered in the United States Academic Decathlon competition. Great for speech practice and impromptu preparation.

Available June 15

MUSIC LISTENING QUIZZES:

Includes 10 quizzes with multiple-choice items that focus on a 30-second musical excerpt from the music selections featured in the USA Decathlon Music Resource Guide: *Music in Science-Fiction Films*. Quizzes will be similar to what students will encounter on the listening portion of the music competition tests to reinforce mastery of the music selections. Includes accompanying mp3 file which is available for electronic download. *Available June 15*

ADDITIONAL STUDY & PRACTICE TEST MATERIALS

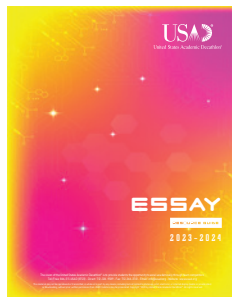
THIS YEAR'S SELECTED LITERATURE:

This year's selected literature is *The Lathe of Heaven* by Ursula K. Le Guin. The U.S. Academic Decathlon has arranged for a special discount from the publisher. Students will also study selected shorter works of literature that relate to the curricular theme. *Available May 15*



ESSAY RESOURCE GUIDE:

The Essay Resource Guide provides Academic Decathletes with all the information they need to know about USAD's essay event. The Essay Resource Guide includes a thorough explication of the essay scoring rubric and offers students techniques, strategies, tips, and guided activities—including detailed analyses of sample essays—to help them write an effective, high-scoring essay. *Available May 15*



PRACTICE LEVEL TESTS:

Includes a series of three tests made up of 150 questions in each subject area. Tests can be used consecutively as a study tool since they are constructed at easy, medium, and hard difficulty levels, allowing for gradual mastery of the curriculum. *Available August 1*

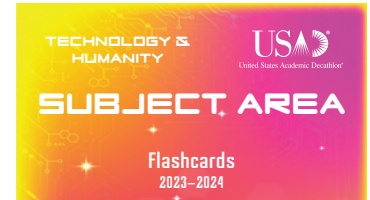
PRACTICE SPECIALTY TESTS:

Includes two 100-item tests in art, literature, music, science, and social science, focused in depth on a specific portion of the subject outlines. Tests consist of a variety of question styles for students to gain knowledge on focused topics. *Available August 1*

4,000 SUBJECT AREA FLASH CARDS:

Companion to the Resource Guides and Online Practice Tests. 600 questions each in art, music, literature, social science, science, and economics; 400 in mathematics. Questions and answers are referenced directly to the Resource Guides to reinforce learning and strengthen fast answer skills.

Available August 1



NOTEBOOK DIVIDERS (10 SETS):

Crammed with pertinent information, this set of 10 tabbed notebook dividers helps students stay organized. Includes artist and composer bios, lists of key terms and definitions, and other information.

Available May 15

PRACTICE COMBO QUIZZES:

Contains four quizzes with a total of 200 items in each subject area. Quizzes focus on topics in sequential order of the subject outlines. Quizzes include a combination of fill-in-the-blank items, short-question and answer format, multiple-choice items, and matching to help students to master the curriculum with a variety of question styles.

Available August 1

ONLINE MARKET

THE ONLINE MARKET:

High-quality practice exams for students to test themselves with over 4,000 multiple-choice questions. Questions are written in the format of the Round 1–4 exams and USAD’s Level Exams. Tests are broken down into three categories that follow the chunking theory of memory stages: Automatic Stage Quizzes, Conceptual Stage Exams, and Comprehensive Stage Exams.

Online
Market

- ★ **Automatic Stage Quizzes:** Focus on small chunks of information and usually consist of questions that are level 1 type questions. **Available August 15**
- ★ **Conceptual Stage Exams:** Cover full sections of the guides and ask higher-level questions, building on the information asked in the *Automatic Stage Quizzes*. **Available September 1**
- ★ **Comprehensive Stage Exams:** These are a combination of the *Automatic Stage*-style questions and *Conceptual Stage*-style questions and cover the entire subject Resource Guide. **Available October 1**

Teams must be members of the USAD Testing and Training Center to purchase the product at a discounted price. Coaches will also have access to the exams and will be able to choose if they want their students to have access to the questions, or if they want the PDF downloadable version only. Teams who choose not to access the training center will have access to the exams in PDF format at a higher price.

PRACTICE TEST PACKAGES

THE PRACTICE TEST PACKAGE:

A complete set of practice materials. The Practice Test Package has 8,000 test questions that are written and reviewed by United States Academic Decathlon®-contracted writers and reviewers. The Practice Test Package contains thousands of test questions to reinforce learning and test-taking skills. The topical breakdown of the test items in the Practice Test Package is in accordance with the percentages noted in the Academic Decathlon Study Guide outlines.

PTP
Practice Test
Package

THE PRACTICE TEST PACKAGE INCLUDES:

- ★ **Online Testing and Training Center:** Train for Academic Decathlon team competition through a unique combination of individual study sessions, direct challenges, and national scrimmages featuring more than 7,000 questions in art, economics, literature, mathematics, music, science, and social science categories. A powerful Academic Decathlon resource offering daily preparation to match intellects with students from around the country through team competitions. **Available August 1.**
- ★ **Practice Level Tests:** Includes a series of three tests made up of 150 questions in each subject area. Tests can be used consecutively as a study tool since they are constructed at easy, medium, and hard difficulty levels, allowing for gradual mastery of the curriculum. **Available August 1.**
- ★ **Music Listening Quizzes:** Includes 10 quizzes with multiple-choice items that focus on a 30-second musical excerpt from the music selections featured in the USAD Music Resource Guide: *Music in Science Fiction Films*. Quizzes will be similar to what students will encounter on the listening portion of the music competition tests to reinforce mastery of the music selections. Includes accompanying mp3 file which is available for electronic download. **Available June 15.**

PRACTICE TEST PACKAGES (CONT.)

ONLINE PRACTICE TESTS: *Standard Practice Tests and Subject Assortment Tests*

The online test system uses the same interface as the United States Academic Decathlon® Online National Competition. Get up to 35 subscriptions for one low price. The system features additional bonuses for the coach and student, which include the ability to:

OPT
Online
Practice
Tests

- ★ Build tests to assist in the team selection process
- ★ Administer tests in a group setting
- ★ Set up competitions between teams and states
- ★ Take an unlimited number of on-screen USAD-format tests, randomly created in each subject area
- ★ Access the test program from any Internet-connected handheld computer or cell phone with full web browser
- ★ Access test reports in seven different formats

Students can access the online practice test program with their assigned username and password.

Online Practice Tests—1300 test items: 200 each in art, economics, literature, music, science, and social science; 100 mathematics questions. Tests will focus on each subject area, section-by-section of the Study Guide outlines, to reinforce mastery of the material. **Available August 1.**

Online Subject Assortment Tests—700 test items. This includes fourteen 50-item tests that consist of an assortment of questions from each of the seven objective subject areas. **Available August 1.**

Online Bonus Questions—1400 multiple-choice questions that go beyond the scope of the *Resource Guides* for additional mastery of the curriculum topics. **Available August 1.**

Academic Decathlon Study Features—

- ★ **Online Flash Cards and Online Quick Quiz:** Test your knowledge by subject category.
- ★ **Online Scrimmage:** Participate in national scrimmages.
- ★ **Head-to-Head Challenge:** Challenge another current user to a direct competition.
- ★ **Online Puzzle Maker:** Access to this software program allows you to quickly create word search and crossword puzzles using word lists and clues directly from the United States Academic Decathlon curriculum.

United States Academic Decathlon Online Community Features—

- ★ My Statistics
- ★ Track your online study results and rankings
- ★ Recent News and Videos
- ★ Access state and national USAD news and information

ART

ART AND TECHNOLOGY

- I. ART FUNDAMENTALS 20%**
 - A. Introduction to Art History
 - B. Elements of Art
- II. PREMODERN ADVANCES IN TECHNOLOGY 15%**
 - A. Concrete in Ancient Rome
 - B. The Art of Memorialization in Ancient Egypt
 - C. Stained Glass in Gothic Architecture
 - D. Chinese Ceramics and the Kiln
- III. ART, TECHNOLOGY, AND THE ADVENT OF GLOBAL TRADE 20%**
 - A. The Compass and the Full-Rigged Ship Forge a New World
 - B. Gutenberg’s Printing Press
 - C. Printmaking
 - D. The Invention of Linear Perspective
 - E. Filippo Brunelleschi’s Dome and Renaissance Architecture
 - F. The Advent of Oil Paint and Canvas
 - G. The Invention of Cristallo Glass
 - H. The Benin Bronzes: Lost-Wax Casting in an African Kingdom
- IV. SCIENTIFIC INNOVATIONS IN PAINT 10%**
 - A. Prussian Blue: The First Modern Pigment
 - B. Mass-Produced Tube Paint and the Impressionists
- V. THE ADVENT OF PHOTOGRAPHY..... 15%**
 - A. The Camera Obscura
 - B. Early Experiments in Fixing an Image
 - C. The Daguerreotype
 - D. Photographic Portraiture: Democratization and Control
 - E. Precisionism: Picturing Modern Architecture
- VI. THE MACHINE AS ART AND ARTIST..... 20%**
 - A. The Physiognotrace
 - B. Eadweard Muybridge and Instantaneous Photography
 - C. Television
 - D. The Automobile

ECONOMICS

AN INTRODUCTION TO ECONOMICS AND TECHNOLOGY, INNOVATION, AND THE ECONOMY

- I. FUNDAMENTAL ECONOMIC CONCEPTS 10%**
 - A. Basic Assumptions of Economics
 - B. Models and Economic Theory
 - C. Positive and Normative Economics
 - D. Efficiency as a Goal
 - E. Microeconomics and Macroeconomics

- II. MICROECONOMICS 40%**
 - A. Perfectly Competitive Markets
 - B. Applications of the Competitive Market Model
 - C. Evaluating Government Policy: The Impact of Price Controls and Taxes
 - D. International Trade
 - E. The Profit Motive and the Behavior of Firms
 - F. Imperfect Competition
 - G. Creative Destruction: The Profit Motive and the Sources of Economic Change
 - H. Market Failures
 - I. Institutions, Organizations, and Government

- III. MACROECONOMICS 30%**
 - A. Macroeconomic Issues
 - B. Macroeconomic Measurement
 - C. Economic Growth, Productivity, and Living Standards
 - D. Savings, Investment, and the Financial System
 - E. Money and Prices in the Long Run
 - F. Short-Run Economic Fluctuations

- IV. THE ECONOMICS OF TECHNOLOGY AND INNOVATION 20%**
 - A. Life in the Preindustrial World
 - B. Dramatic Improvements in the Last Two Hundred Years
 - C. How Did the “Great Enrichment” Happen?
 - D. Origins and Diffusion of Technology-Driven Growth
 - E. Creative Destruction and Technological Unemployment
 - F. Innovation Today
 - G. Appropriation and the Value of R&D
 - H. Other Important Drivers of Innovation

LITERATURE

AN INTRODUCTION TO SCIENCE FICTION

- I. CRITICAL READING..... 15%**
 - A. Purpose and Main Idea
 - B. Structure
 - C. Restatement of Information
 - D. Genres and their Characteristics
 - E. Language and Tone
 - F. Grammar and Syntax
 - G. Vocabulary in Context
 - H. Diction

- II. HISTORICAL OVERVIEW OF THE SF GENRE 5%**
 - A. Science and Fiction to Science Fiction
 - B. *Frankenstein*, *The Chemical Wedding*, *Symzonia*, and Debates about the First SF Novel
 - C. Science and Nineteenth-Century American Literature
 - D. Pulp Magazines and the Golden Age of Science Fiction
 - E. Changing Technology: Radio, Film, and Television
 - F. Cold War Tensions and the Race for Technological Supremacy
 - G. New Voices, New Visions: The New Wave
 - H. The Emergence of Cyberpunk
 - I. Steampunk
 - J. Science Fiction in the Twenty-First Century

- III. URSULA K. LE GUIN AND *THE LATHE OF HEAVEN* (1971) 50%**
 - A. Concerns about Artificial Intelligence
 - B. Technology Anxiety: From Prometheus to Frankenstein
 - C. Technology as a Double-Edged Sword
 - D. *The Lathe of Heaven* and the Theme of Technology and Humanity
 - E. The Biographical Context of *The Lathe of Heaven*: Ursula K. Le Guin’s Life
 - F. Historical Context of *The Lathe of Heaven*: From the Atomic Bomb to Artificial Intelligence
 - G. *The Lathe of Heaven*: Cast of Characters
 - H. Themes of *The Lathe of Heaven*
 - I. The Role of Psychology in *The Lathe of Heaven*
 - J. The Role of Philosophy in *The Lathe of Heaven*
 - K. The Publication History and Media Afterlife of *The Lathe of Heaven*



- IV. SHORTER SELECTIONS..... 40%**
- A. SELECTED WORK: Nathaniel Hawthorne’s “Rappaccini’s Daughter” (1844)
 - B. SELECTED WORK: Ambrose Bierce’s “Moxon’s Master” (1899)
 - C. SELECTED WORK: Ray Bradbury’s “I Sing The Body Electric!” (1969)
 - D. SELECTED WORK: Octavia E. Butler’s “Childfinder” (1970; published in 2014)
 - E. SELECTED WORK: John Crowley’s “Snow” (1985)
 - F. SELECTED WORK: C.L. Moore’s “No Woman Born” (1944)
 - G. SELECTED WORK: Neil Gaiman’s “The Mushroom Hunters” (2017)
 - H. SELECTED WORK: Sarah Howe’s “Relativity” (2015)

MATHEMATICS

GENERAL MATHEMATICS, GEOMETRY, AND AN INTRODUCTION TO DIFFERENTIAL CALCULUS

- I. GENERAL MATHEMATICS 25%**
 - A. Simple and Compound Interest
 - B. Basic Counting
 - C. Probability of Equally Likely Events and Binomial Distribution

- II. GEOMETRY 65%**
 - A. Right Triangles
 - B. Coordinate Geometry
 - C. Plane and Solid Figures

- III. INTRODUCTION TO DIFFERENTIAL CALCULUS 10%**
 - A. Average Rate of Change of Basic Polynomial Functions
 - B. Basic Limits and Continuity
 - C. First Derivative of Basic Polynomial Functions and Graphical Interpretation
 - D. Equations of Tangent Lines

Pittsburgh was named in 1758, by General John Forbes, in honor of British statesman William Pitt, 1st Earl of Chatham. Pittsburgh is located in the southwest of the state, at the confluence of the Allegheny River and the Monongahela River, forming the Ohio River. Pittsburgh is known both as “the Steel City” for its more than 300 steel-related businesses and as the “City of Bridges” for its 446 bridges.

Aside from steel, Pittsburgh has led in the manufacturing of other important materials — aluminum and glass — and in the petroleum industry. Additionally, it is a leader in computing, electronics, and the automotive industry. For part of the 20th century, Pittsburgh was behind only New York City and Chicago in corporate headquarters employment. After the deindustrialization of the mid-20th century, Pittsburgh has transformed into a hub for the health care, education, and technology industries.

As authentic as it is awesome, the strength of Pittsburgh lies in the friendliness of its people and the beauty of its landscape. Add award-winning chefs, eclectic art galleries, one-of-a-kind venues and world-class attractions all conveniently located within walking distance of the David L. Lawrence Convention Center, and you’ll find that Pittsburgh makes for one of the most ideal meeting destinations in the country.

Convention Center/Hotels

From its contemporary architectural build, the David L. Lawrence Convention Center was the first Platinum LEED-certified convention center in the United States. On the cutting edge of design, this innovative structure connects the urban city to the waterfront overlooking the Allegheny River. A cascading waterfall and walkway lead to 24 miles of riverfront trails and access to river cruises aboard the Gateway Clipper. The architecturally stunning building symbolizes this region’s commitment to sustainable development and environmental awareness.

An icon in the Steel City, The Westin Pittsburgh is an urban oasis brimming with modern style. Welcoming

hotel guests with curated amenities, design-forward accommodations and an enviable downtown location, we offer everything you need for a productive and relaxing hotel stay. Minutes from Heinz Field, PNC Park, Market Square, PPG Paints Arena and Close to the University of Pittsburgh. Walking distance to restaurants and the eclectic Strip District. Light-filled and welcoming, our hotel rooms and suites offer signature details like our Westin Heavenly® Bed and Heavenly® Bath. Breakfast is served daily at Starbucks. Visit Bill’s Bar and Burger for mouthwatering American classics for lunch and dinner. Reenergize in our WestinWORKOUT® Fitness Studio, fully equipped with socially distant set-up exercise equipment and cardio equipment including Peloton Bikes. Benefit from a direct indoor walkway connection to David L. Lawrence Convention Center.

A safe, walkable Downtown, through the Cultural District, allows guests plenty of free-time options. Pittsburgh is packed with possibilities and boasts 200+ restaurants within easy walking distance of the convention center and Downtown accommodations. Nightlife features walkable hot spots in Market Square, as well as the North Shore, just a short walk across one of the three sister bridges.

What To Do?

Pittsburgh’s major art museums include the Andy Warhol Museum, the Carnegie Museum of Art, The Frick Pittsburgh, Pittsburgh Center for the Arts, and the Mattress Factory. The ToonSeum, one of three museums in the U.S. dedicated to cartoon art, is downtown. The Carnegie Museum of Natural History is the fourth ranked natural history museum in the U.S. and has extensive dinosaur, mineral, animal, and Egyptian collections. The Carnegie Science Center and associated SportsWorks has interactive technology and science exhibits. The Duquesne Incline is a century-old cable car offering the best views of Downtown Pittsburgh. Kennywood Amusement Park is a local park open 120+ years. Check out their classic rides! Catch a game with the Pittsburgh Pirates if they’re in town.



2024 U.S. ACADEMIC DECATHLON NATIONALS • APRIL 25-27, 2024
PITTSBURGH, PENNSYLVANIA

MUSIC

MUSIC IN SCIENCE-FICTION FILMS

- I. BASIC ELEMENTS OF MUSIC THEORY 20%**
 - A. Sound and Music
 - B. Pitch, Rhythm, and Harmony
 - C. Other Aspects of Musical Sound
 - D. Form in Music
 - E. Which Is the Real Music? Scores, Recordings, and Performance

- II. BUILDING FROM THE FAMILIAR 30%**
 - A. The Vaudeville Foundation
 - B. Music as a Mask for Noisy Film Projectors
 - C. The First Science-Fiction Film
 - D. Méliès’s Film Comes to America
 - E. Greater Musical Ambition
 - F. Synchronized “Sound”
 - G. A Notorious Case of “Temp Love”
 - H. *E.T.*, the Eighties Blockbuster
 - I. Romantic Gestures in a Modern Genre

- III. EXPLORING NEW TIMBRES..... 20%**
 - A. Music by a Master: Bernard Herrmann
 - B. Bebe and Louis Barron and *Forbidden Planet*
 - C. Starring the Synthesizer
 - D. *TRON*

- IV. MUSIC PLAYS A ROLE.....30%**
 - A. John Williams, *Star Wars*, and Source Music from the Cantina Band
 - B. Spielberg’s *Close Encounters of the Third Kind*
 - C. Music as a Means of Establishing Setting
 - D. *WALL•E*: Music Humanizes
 - E. *Inception* and Édith Piaf’s “Non, je ne regrette rien”
 - F. *Mars Attacks!* And Music Saves the Day

SCIENCE

AN INTRODUCTION TO NEUROSCIENCE

- I. CELLS AND THE ANATOMY OF THE BRAIN 15%**
 - A. Neurons
 - B. Glia
 - C. The Anatomy of the Central Nervous System
 - D. The Anatomy of the Peripheral Nervous System

- II. NEURAL COMMUNICATION 20%**
 - A. The Resting Membrane Potential
 - B. The Action Potential
 - C. Synaptic Transmission

- III. SENSORY AND MOTOR SYSTEMS 35%**
 - A. The Visual System
 - B. The Auditory System
 - C. The Chemical Senses
 - D. The Somatosensory System
 - E. The Motor System

- IV. SYNAPTIC PLASTICITY AND MEMORY 15%**
 - A. Experience-Based Cortical Changes
 - B. Strengthening and Weakening Synapses
 - C. Memory Systems

- V. SENSORY AND MOTOR SYSTEMS 15%**
 - A. Methods of Perturbing the Brain
 - B. Methods of Recording from the Brain
 - C. Computational Neuroscience
 - D. Computational Psychiatry

SOCIAL SCIENCE


THE HISTORY OF COMPUTERS

- I. EARLY INFORMATION PROCESSING 20%**
 - A. Early Information Processing in Great Britain
 - B. Early Information Processing in the United States
 - C. Early Information Processing in Germany and the Work of Konrad Zuse

- II. GENERAL PURPOSE ELECTRONIC COMPUTERS25%**
 - A. The ENIAC
 - B. Progress in England
 - C. The Completion of the EDVAC
 - D. The Eckert-Mauchly Computer Corporation (EMCC)
 - E. The Growth of IBM
 - F. Other Players in the Mid-Twentieth-Century Computer Industry
 - G. Advances in Hardware
 - H. Software
 - I. IBM System/360
 - J. The ENIAC Patent Case

- III. TOWARD “PERSONAL” COMPUTING30%**
 - A. Project Whirlwind
 - B. SAGE
 - C. SABRE
 - D. Timesharing
 - E. DEC and the Rise of Minicomputers
 - F. UNIX
 - G. Networking
 - H. XEROX PARC
 - I. The Microprocessor
 - J. Personal Computers
 - K. Video Games
 - L. The Graphical User Interface Goes Mainstream

- IV. THE INTERNET, SOCIAL MEDIA, AND MOBILE COMPUTING 25%**
 - A. The GNU Project and the Open Source Movement
 - B. Hypertext
 - C. Browser Wars
 - D. Search Engines
 - E. The Dot-com Bubble
 - F. Java
 - G. NeXT
 - H. The iMac

- 
- I. Microsoft's Gradual Decline
 - J. Mobile Computing
 - K. Smartphones
 - L. Web 2.0
 - M. Tablets
 - N. Oracle vs. Google
 - O. Moore's Law and Multi-Core Processors
 - P. Cloud Computing
 - Q. The Impact of COVID-19
 - R. Blockchain
 - S. Artificial Intelligence
 - T. Quantum Computing

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AWARDS PRESENTED AT THE 2023 USAD NATIONALS

- The Kristin Caperton Inspiration Award
- B. Franklin Reinauer II Economics Prize
- State Directors' Communication Award
- Asa Edwin Reaves, Esq. Social Science Prize
- Frank Wurtzel Prize
- Participation medals for all students
- Most valuable team member from each team
- Highest-scoring decathlete from each team
- Individual gold, silver, and bronze medals in art, economics, essay, interview, literature, mathematics, music, science, social science, and speech for varsity, scholastic, and honor divisions, in Divisions I, II, III, and IV
- Super Quiz™ Team Award for Divisions I, II, III, and IV
- Rookie Team of the Year for Divisions I, II, III, and IV
- Founder's Scholarship: Most Improved Varsity Student in Divisions I, II, III, and IV
- Overall individual awards (first-, second-, and third-place) and scholarships for varsity, scholastic, and honor categories for Divisions I, II, III, and IV
- Overall team awards for first-, second-, third-, and fourth-place for Divisions I, II, III, and IV
- Dr. Robert D. Peterson National Championship Award

Individual Event Awards

Gold, silver and bronze medals are awarded in each division to the first-, second-, and third-place students from the honor, scholastic and varsity categories in each event. All ties are awarded.

Individual Overall Awards

Scholarships and plaques are awarded to team participants in Division I, II, III, and IV to the first-, second-, and third-place students from the honor, scholastic and varsity categories with the highest cumulative scores from all 10 events.

Team and School Awards

Team scores are determined by the two highest honor scores, the two highest scholastic scores and the two highest varsity scores for all 10 events.

Divisional Awards

Championship trophies and banners are presented to the first-, second-, and third-place teams, and plaques are awarded to the fourth-place teams in Division I, II, III and IV.

Super Quiz Team Awards

Team plaques are awarded to the teams in Division I, II, III, and IV with the highest raw score for all nine students in the Super Quiz.

B. Franklin Reinauer II Economics Prize

This award is presented to the highest-scoring U.S. team participant in economics from Division I, II, III, or IV.

Asa Edwin Reaves, Esq. Social Science Prize

This award is given to the highest-scoring U.S. varsity team members from Division I, II, III or IV in the area of social science.

Frank Wurtzel Prize

This award is given to the varsity student from Division I, II, III or IV with the highest combined score in essay, literature, and speech.

State Directors' Communication Award

This award is given on a three-year cycle by category (varsity, scholastic, honor) to the team participants from Division I, II, III or IV with the highest combined total scores in the essay, interview, and speech events.

Rookie of the Year Award

Plaques are awarded to the highest-scoring rookie team, defined as a team that has not competed at Nationals for ten or more years, in each division.

Founder's Scholarship: Most Improved Varsity Student

This award is presented to a varsity U.S. team participant in Divisions I, II, III, IV who has improved their score the most at Nationals from their state competition score.

Highest-Scoring Student Award

An award and a medal are presented to the highest-scoring student on each team in Division I, II, III, IV.

Most Valuable Team Member

An award and a medal are presented to the decathlete who was chosen by their teammates as the most valuable team member on each team in Divisions I, II, III, IV.

Kristin Caperton Inspiration Award

This award is presented to U.S. team participants who have demonstrated particular strength of character, perseverance, commitment, inspiration or team leadership, while overcoming significant obstacles or unusual circumstances to participate in the United States Academic Decathlon.

Dr. Robert D. Peterson National Championship Award

This award is given to the U.S. team from Division I, II or III with the highest overall score, and that team is proclaimed the National Champion.

2023 USAD NATIONALS WINNERS



FIRST PLACE DIVISION I
El Camino Real Charter High School, California



FIRST PLACE DIVISION II
Wilmot Union High School, Wisconsin



FIRST PLACE DIVISION III
Oakwood High School, Ohio



FIRST PLACE DIVISION IV
Hamilton High School, Arizona

2023 USAD NATIONALS WINNERS

KRISTIN CAPERTON INSPIRATION AWARD WINNERS



2023 Kristin Caperton Inspiration Award recipient Ellie Tavani, from North Atlanta High School in Georgia.



2023 Kristin Caperton Inspiration Award recipient Sophie Walker, from Basha High School in Arizona.

2023 USAD NATIONALS WINNERS

ROOKIE OF THE YEAR AWARD WINNERS



DIVISION I ROOKIE OF THE YEAR
Punahou School, Hawaii



DIVISION II ROOKIE OF THE YEAR
Amity High School, Connecticut



DIVISION IV ROOKIE OF THE YEAR
Lane Tech College Prep High School, Illinois



United States Academic Decathlon®