

Official Academic Transcript

Barefoot Technology Academy

A virtual microschool reimagining education for the radically curious.

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Timmy Jones

Student ID: XXcAH4kPaoN5UIxs5gOXuTdknbM2
Enrollment Period: 2026 – 2030
Graduation Status: In Progress (June, 2030)
Full Project Portfolio:
<https://sites.google.com/bta-timmy>

About the School

Barefoot Technology Academy is a project-based, competency-focused and STEM-centered college preparatory high school for gifted students. Within an advanced academic program, students deeply explore topics of interest to complete interdisciplinary projects.

Barefoot Technology Academy was founded in 2026, and was accredited by WASC in 2027.

About the Student

A curious and driven student, Timmy is passionate about exploring the intersections of biology, computer science, and mathematics. With a strong foundation in analytical thinking and problem-solving, he enjoys using computational tools to understand complex biological systems. Timmy has pursued advanced coursework in STEM subjects and enjoys discussing philosophy.

Reading the Transcript

This transcript is a summary of the student's academic achievements and competencies. It contains 6 sections: a summary of the student's masteries across the curriculum, a list of classes the student has taken, a selection of the student's top projects evidencing their competencies, a list of selected activities including electives, work experience and community service, a list of the student's external qualifications, test scores and other accomplishments, and the graduation requirements the student has met.

Graduation Requirements

Graduation Requirements include: 4 years of English, Philosophy, Social Emotional Learning, Skill Development, and Computer Science, mastery in all core competencies and 2 or more advanced competencies, an advanced project portfolio, a minimum of 12 Dual Enrollment Credits at Arizona State University, 100 hours of physical activity and 40 hours of community service per school year, and 80 hours of work experience.

Competency Summary

Students at Barefoot Technology Academy are assessed on a variety of skills and competencies. These skills are assessed through projects. Students have to achieve mastery of all core competencies and two or more advanced competencies to earn a diploma. Advanced competencies are outlined in black.

The scores are weighted based on what grade the student was in when they completed the project, with higher weight given to higher grade levels.

A score of 1 represents basic high school level work and an emerging competency, 2 represents good high school level work and a developing competency.

A score of 3 represents advanced high school level work and proficiency in the competency, and a score above 4 represents undergraduate level work and mastery of the competency.

For a more detailed description of competency scores, see the final page of this transcript.

Scientific Inquiry & Experimentation 2.5 Demonstrated in 3 projects	Engineering & Development 2.7 Demonstrated in 5 projects	Critical Thinking & Logic 3.4 Demonstrated in 3 projects
Computational Thinking & Programming 3.1 Demonstrated in 5 projects	Quantitative Reasoning 4 Demonstrated in 8 projects	Research & Scholarly Communication 3.1 Demonstrated in 5 projects
Creative Thinking 3.3 Demonstrated in 2 projects	Multimodal Communication 2.9 Demonstrated in 5 projects	Civic & Global Literacy 3.6 Demonstrated in 5 projects
Collaboration & Leadership 3.8 Demonstrated in 3 projects	Self-Direction & Meta-Learning 2 Demonstrated in 1 project	Personal Development 4 Demonstrated in 1 project
Scientific & Technical Engineering — Not Demonstrated Yet	Data Science & Research 4 Demonstrated in 1 project	Entrepreneurship & Innovation 4 Demonstrated in 1 project
Art, Design & Production — Not Demonstrated Yet		Philosophy, Human Systems and Culture — Not Demonstrated Yet

Classes

Students at Barefoot Technology Academy are enrolled in three major categories of classes: Core Classes, Independent Studies Classes and Dual Enrollment Classes.

Core Classes are socratic seminars in literature, philosophy, SEL, skill development, and computer science.

Independent Studies Classes are self-directed classes where students explore topics of interest to them through projects and deep research. Students are expected to create a portfolio of projects to demonstrate understanding of the topic.

Dual Enrollment Classes with Arizona State University. All students must complete four Dual Enrollment Classes.

9th Grade

Core Classes

Idea Lab I: Foundations of Philosophy

Students are introduced to the major questions of philosophy through Socratic seminars and foundational texts from global traditions. Topics include knowledge, existence, reality, and the roots of human thought.

Literature Circle I

Students read and analyze 12-14 texts written between 1820 and 2012, deeply engaging with literature, historical context and thematic study.

Tool Kit I: Learning How to Learn

Students build essential project skills like time management, collaboration, and basic research while exploring creative tools like brainstorming, storyboarding, and reflection.

Tech Studio I: Foundations of Digital Making

Students learn the building blocks of the web: how to structure content with HTML, style it with CSS, and make it interactive with JavaScript. These skills allow students to create websites, online portfolios, and creative web apps.

Tech Studio II: Coding in Python

Python introduces students to core programming concepts like variables, loops, functions, and data structures.

Tech Studio III: Coding in Wolfram Language

Students use Wolfram Language to explore computation as a tool for thinking: ideal for math, data analysis, and modeling.

Community Forum I: Finding Your Voice

Students explore topics like online safety, emotional wellness, and identity while practicing how to express themselves respectfully and listen actively.

Advanced Studies

Honors Independent Study: Astrobiology

The student investigated the conditions necessary for life beyond Earth, exploring planetary science, extremophiles, and current methods for detecting biosignatures.

Honors Independent Study: Environmental Ethics

The student examined philosophical and policy-based approaches to climate responsibility, land use, and intergenerational justice.

Honors Independent Study: History of Mathematics

Through primary texts and historical research, the student traced the development of major mathematical concepts across ancient, Islamic, and modern traditions.

ASU: College Algebra

Students learn how to apply algebraic reasoning and how to identify functions, domains, ranges, intercepts and other critical algebraic concepts.

ASU: Environmental Science

Students learn the role that organisms (including humans) play in the cycling of energy and resources on Earth.

10th Grade

Core Classes

Idea Lab II: Moral and Political Philosophy

Students explore questions of justice, morality, freedom, and the structure of society. Readings span thinkers from Plato to Fanon, Confucius to bell hooks.

Literature Circle II

Students read and analyze 12-14 texts written between 1510 and 1950, deeply engaging with literature, historical context and thematic study.

Tool Kit II: Tools for Thinking and Creating

Students deepen their capacity for design thinking, academic writing, and data literacy while learning how to communicate ideas clearly and persuasively.

Tech Studio IV: Coding for Data Science

Students learn to analyze data sets, create visualizations, and draw insights using Python, Wolfram Language and various Data Visualization tools.

Tech Studio V: Video Game Development

Using Unity and C#, students learn how to build interactive experiences, from games to simulations. This module blends storytelling, logic, and creativity while introducing object-oriented programming.

Community Forum II: Life Skills & Healthy Choices

Students focus on topics like mental health, digital citizenship, healthy relationships, and financial literacy. Students gain real-world skills and learn to support themselves and others with empathy and awareness.

Advanced Studies

Honors Independent Study: Astrophysics

Studied cosmology, stellar evolution, and orbital mechanics using a college-level physics textbook and MIT OpenCourseWare lectures.

Honors Independent Study: Game Design & Narrative Systems

Studied game design theory, interactive storytelling, and behavioral psychology through readings, case studies, and hands-on software tutorials.

Honors Independent Study: Medical Ethics

Investigated topics including patient autonomy, end-of-life decisions, clinical trial ethics, and healthcare access through bioethics journals and medical case studies.

Independent Study: AP Calculus BC

Students study for the AP Calculus BC exam.

ASU: Chemistry

Students understand and learn to solve problems from atomic and molecular chemistry.

ASU: Precalculus

Students learn to use basic algebraic operations on numbers, expressions, and equations, solve real-world application problems, and apply algebraic and trigonometric reasoning to solve a range of problems.

ASU: Principles of Programming

Students demonstrate problem solving techniques for programming, develop algorithms to solve problems, and develop fundamental skills in software engineering.

11th Grade

Core Classes

Idea Lab III: World Religions and Spiritual Thought

Students investigate how different religious traditions address life's biggest questions, comparing beliefs, rituals, and ethical frameworks across cultures.

Literature Circle III

Students read and analyze 12–14 texts written between 1890 and 2000, deeply engaging with literature, historical context and thematic study.

Tool Kit III: From Insight to Impact

Students strengthen their skills in statistical reasoning, systems thinking, and leadership. Emphasis is placed on turning research into action, collaborating across roles, and navigating complex challenges with creativity and clarity.

Tech Studio VI: Advanced App Development

Students explore JavaScript, React and other complex tools to create web, mobile and desktop applications. They extend their understanding of software development principles, version control and collaboration.

Tech Studio VII: Creative Tools

Students use Figma to design user interfaces and wireframes for websites and apps, and explore UI/UX design principles.
Students use Blender to explore 3D modeling, animation, and visual effects.

Community Forum III: Purpose & Possibility

Students reflect on who they are and who they want to become, exploring topics like career readiness, values, and goal-setting.

Advanced Studies

Honors Independent Study: Neurobiology of Decision-Making

Investigated how the brain processes risk, reward, memory, and emotion through neuroscience textbooks, current journal articles and live experimentation.

Honors Independent Study: Propaganda Psychology in World War II

Studying the impact of Hitler's psychology on the propaganda campaigns supporting the Holocaust.

Honors Independent Study: Worldbuilding & Systems Thinking in Game Design

Combined narrative design, environmental storytelling, and systems theory to explore how fictional worlds are constructed and sustained.

ASU: Calculus for Engineers

Students understand computation of limits, continuity, average and instantaneous rates of change, accumulation and Riemann Sums.

ASU: Engineering

Students apply the steps of the engineering design process based on the analysis of customer needs to design, build, and test a physical prototype.

12th Grade

Core Classes

Idea Lab IV: Ethics and Dilemmas in the Modern World

Students grapple with complex ethical issues from technology and war to environmental justice and bioethics. They apply philosophical reasoning to real-world dilemmas, preparing for thoughtful citizenship.

Literature Circle IV

Students read and analyze 12–14 texts written between 1250 and 1980, deeply engaging with literature, historical context and thematic study.

Tool Kit IV: Mastery and Real-World Readiness

Students refine high-level skills in pitching, public speaking, strategic planning, and mentorship. They apply their full tool kit to lead ambitious projects and prepare for college, work, or wherever curiosity takes them next.

Tech Studio IX: Advanced Coding for Data Science

Students use data to ask big questions, find patterns, and tell compelling stories. They dive into real-world datasets and apply advanced tools like Python, SQL, and machine learning libraries to clean, analyze, visualize, and interpret complex information.

Tech Studio VIII: Artificial Intelligence

Students explore the foundations of artificial intelligence, from how machines "learn" patterns to how algorithms shape our world. They work hands-on with tools like Python, machine learning libraries, and pre-trained models to create simple AI applications.

Tech Studio X: Modelling and Simulation

Students use Wolfram Language to build simulations of real and imagined systems, from traffic flows to ecosystems, epidemics to economies.

Community Forum IV: College & Career Readiness

Students explore pathways beyond high school through workshops on college applications, career planning, financial literacy, and workplace readiness. Emphasis is placed on self-reflection, goal setting, and developing the practical skills needed for post-secondary success.

Advanced Studies

Honors Independent Study: Assistive Technology Design

Studied human-centered design principles, accessibility standards, and disability advocacy through technical manuals, case studies, and interviews.

Honors Independent Study: Mathematical Modeling of Complex Systems

Studied nonlinear dynamics, chaos theory, and emergent behavior through mathematical models of ecological, social, and physical systems.

Honors Independent Study: Public Health Communication

Researched health literacy, risk perception, and effective science communication using case studies from epidemiology and behavioral psychology.

ASU: European History

Students learn about a number of cultures and periods, including: Egypt and Mesopotamia, Greece, Rome, Judaism, The Byzantine Empire, The Rise of Islam, and Medieval Europe.

ASU: Macroeconomics

Students apply marginal analysis to common economic decision problems, understand economic efficiency and sources of deviations from it, and understand economic policy.

ASU: Technological, Social, and Sustainable Systems

Students understand the impact of technology on sustainability and society, using relevant historical examples and current issues in the news.

Featured Projects

Students at Barefoot Technology Academy must complete a portfolio of projects to demonstrate their competencies. Projects are completed individually or in groups.

Students present their projects to the school community, including a panel of experts, in a Portfolio Defense.

This student completed 13 projects, and chose to feature 8 projects in this transcript.

Their full project portfolio can be found at: <https://sites.google.com/bta-timmy>

They have chosen to highlight the following projects:

9th Grade

INDIVIDUAL

Algebra Across Ages: The Journey from Al-Khwarizmi to the Renaissance

Class: Honors Independent Study: History of Mathematics - 9th Grade

This project explored the historical transmission of algebraic knowledge from its early formalization in the Islamic Golden Age to its reinvention and expansion in Renaissance Europe. Centering on the work of Al-Khwarizmi, often considered the "father of algebra," I analyzed primary texts including Al-Kitab al-Mukhtasar fi Hisab al-Jabr wal-Muqabala and compared them to later European interpretations such as those by Fibonacci and Cardano. The study examined how mathematical ideas were translated—linguistically and conceptually—through different cultural contexts. Using a digital timeline and a short video essay, I presented how algebra evolved not only as a tool for calculation but as a language of abstraction, shaped by historical needs and philosophical worldviews.

Artifacts:

- Video Essay: <https://youtube.com>
- Digital Timeline: <https://timeline.com>

Multimodal Communication: 2

Computational Thinking & Programming: 1

Civic & Global Literacy: 2

Self-Direction & Meta-Learning: 2

Critical Thinking & Logic: 1

INDIVIDUAL

Which Exoplanet Atmospheres Are Most Likely to Support Life?

Class: Honors Independent Study: Astrobiology - 9th Grade

Analyzed known exoplanets (using NASA Exoplanet Archive) to identify ones most likely to support life. Focused on atmospheric compositions and potential biosignature gases, the planet's location in the habitable zone and the host star type and radiation levels. Simulated atmospheric spectra for a hypothetical life-bearing exoplanet using NASA's Planetary Spectrum Generator.

Artifacts:

- Simulation: <https://simulation.com>
- Final Report: <https://finalreport.com>

Scientific Inquiry & Experimentation: 2

Research & Scholarly Communication: 1

Quantitative Reasoning: 2

Engineering & Development: 2

GROUP

Modeling Exoplanet Detection Techniques

Class: Honors Independent Study: Astrophysics – 10th Grade

In this project, I investigated methods used by astronomers to detect exoplanets—planets orbiting stars outside our solar system. Drawing on principles from cosmology, stellar evolution, and orbital mechanics, I modeled two primary detection techniques: the transit method and the radial velocity method. Using data from real exoplanet observations (e.g., NASA’s Kepler mission), I simulated light curves and Doppler shifts to demonstrate how astronomers infer the presence and properties of distant planets. The final deliverable was a research-style paper, accompanied by graphs and visualizations generated through code, which analyzed the effectiveness and limitations of each detection method under different conditions.

Artifacts:

- Research Paper: <https://paper.com>
- Interactive Simulation: <https://simulation.com>

Scientific Inquiry & Experimentation: 2

Engineering & Development: 3

Quantitative Reasoning: 3

Computational Thinking & Programming: 3

Research & Scholarly Communication: 3

INDIVIDUAL

SimulNation: Building Living Worlds Through Systems Design

Class: Honors Independent Study: Worldbuilding & Systems Thinking in Game Design – 11th Grade

Our group explored how complex fictional worlds can be designed using narrative principles, systems theory, and interactive simulations. We created a fictional universe and developed a worldbuilding guide that mapped out its political structures, ecological cycles, economic systems, and cultural dynamics. The guide was supported by an interactive prototype, built in Unity, that allowed users to simulate how changes in one system (e.g., a resource shortage or political uprising) ripple across the world. Drawing on systems thinking, we constructed feedback loops and agent behaviors to demonstrate interdependence within the world. The project was both a narrative exercise and a functional model of systemic storytelling.

Artifacts:

- SimulNation Game: <https://game.com>
- Design Documentation: <https://docs.com>
- Research Positioning: <https://positioning.com>

Engineering & Development: 3

Computational Thinking & Programming: 4

Multimodal Communication: 3

Collaboration & Leadership: 4

INDIVIDUAL

Machine Judgment: Ethical Implications of AI in Medical Diagnosis and Treatment

Class: Unknown Class

In this course, I explored foundational topics in medical ethics, including patient autonomy, informed consent, end-of-life decision-making, and the ethical distribution of healthcare resources. For the final project, I researched and presented a formal position paper on the ethical challenges posed by the integration of artificial intelligence (AI) into medical diagnosis and treatment. The paper examined both potential benefits (e.g., improved diagnostic accuracy, faster decision-making) and ethical risks (e.g., algorithmic bias, transparency, diminished patient-clinician trust). Drawing from peer-reviewed bioethics journals, clinical trial data, and case studies, I evaluated current AI applications in healthcare and argued for a set of ethical guidelines that prioritize accountability, equity, and patient-centered care.

Artifacts:

- Final Paper (journal pre-print): <https://journal.com>

Scientific Inquiry & Experimentation: 3

Critical Thinking & Logic: 4

Quantitative Reasoning: 4

Research & Scholarly Communication: 3

12th Grade

INDIVIDUAL

Screens & Sleep: A Public Health Campaign for Teen Mental Wellness
Class: Honors Independent Study: Public Health Communication – 12th Grade

I designed and distributed a public health campaign aimed at local teenagers, addressing the links between sleep, mental health, and social media use. The campaign was informed by research in epidemiology, behavioral psychology, and current public health guidelines. It included multimodal outreach materials, including interactive digital content. I measured engagement metrics to assess the campaign's clarity and impact.

Artifacts:

- Campaign: <https://campaign.com>

Multimodal Communication: 4

Civic & Global Literacy: 4

Quantitative Reasoning: 4

INDIVIDUAL

Agent-Based Models of Fire, Traffic, and Disease
Class: Honors Independent Study: Mathematical Modeling of Complex Systems – 12th Grade

In this project, I explored how complex systems such as ecosystems and traffic networks can be understood and predicted through mathematical modeling, particularly using nonlinear dynamics and chaos theory. I developed a series of agent-based simulations, where each model was grounded in real-world data. The project culminated in a research paper, where I compared model behaviors, validated predictions, and discussed the limitations and ethics of modeling real-world systems.

Artifacts:

- Models: <https://models.com>

Quantitative Reasoning: 5

Research & Scholarly Communication: 4

AD: Data Science & Research: 4

INDIVIDUAL

Designing Accessible Solutions for Diverse Needs
Class: Honors Independent Study: Assistive Technology Design – 12th Grade

In this project, I applied human-centered design principles and accessibility standards to create a tool aimed at supporting blind users. The process involved extensive research, including case studies and interviews with individuals to understand their needs and preferences. Based on this input, I designed and developed a digital prototype. User testing sessions provided valuable feedback. The final deliverable included the prototype, detailed documentation of the design process, and a reflective analysis focused on ethical and practical aspects of inclusive technology.

Artifacts:

- Software: <https://software.com>
- Accessibility Research Paper: <https://paper.com>

Civic & Global Literacy: 4

Collaboration & Leadership: 4

AD: Entrepreneurship & Innovation: 4

Quantitative Reasoning: 5

Experiences

To meet graduation requirements, students must complete 100 hours of physical activity and 40 hours of community service per school year.

They must also complete 80 hours of work experience, internships or apprenticeships.

Students can also display any other activities, experiences, training and awards relevant to their studies.

10th Grade

Reading Program

42 hours • Volunteer
10/24/2025 - 10/25/2025

11th Grade

Food Bank

49 hours • Volunteer
9/10/2025 - 10/10/2025

World War II History

5 hours • Clubs & Classes
12/9/2025 - 1/16/2026

12th Grade

National Library of Medicine

80 hours • Internship
8/3/2025 - 8/22/2025

Certificates & Awards

Students are encouraged to take exams and earn certificates to demonstrate their knowledge and skills. Many students also engage in competitions and research programs.

Examinations & Qualifications

- SAT**
College Board • 1400 • 2025-10-06
- AP Calculus BC**
College Board • Score: 5 • 2025-09-06
- AP Biology**
College Board • Score: 5 • 2025-09-06
- AP Computer Science A**
College Board • Score: 4 • 2025-07-25

Competitions

- American Computer Science League Upper Division**
American Computer Science League • Top 50 • 2025-10-04
- Citizen Entrepreneurship Competition**
Stiftung Entrepreneurship • Gold Award • 2025-10-03

Badges & Credentials

- iDEA Gold Award**
Inspiring Digital Enterprise Award • Gold Award • 2025-08-15

Awards & Honors

- Eagle Scout Award**
Boy Scouts of America • 2025-08-08

Scholarships

- Davidson Scholar**
Davidson Scholars • 2025-08-04

Graduation Requirements

Timmy Jones has completed the following graduation requirements:

Mastery in all Core Competencies	Completed
Mastery in Two or More Advanced Competencies	Completed
Core Classes	9th Grade10th Grade11th Grade12th Grade
Final Portfolio Defense	STEM ResearchNon-STEM ResearchEntrepreneurshipServiceCreative
Community Service (40 hours per year)	9th Grade10th Grade11th Grade12th Grade
80 hours Work Experience	Completed
Physical Activity (100 hours per year)	9th Grade10th Grade11th Grade12th Grade
Leadership Roles	9th Grade10th Grade11th Grade12th Grade
Cultural Proficiency	Completed
Summer Intensive	9th Grade10th Grade11th Grade12th Grade
4 Dual Enrollment Classes	Completed

Incomplete Graduation Requirements

Timmy Jones has not yet completed the following graduation requirements:

Minimum 4 Dual Enrollment Classes	Incomplete
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In Depth School Profile

About Barefoot Technology Academy

Barefoot Technology Academy is a virtual microschool reimagining education for the radically curious. We are a project-based, competency-focused and STEM-centered high school for gifted, twice-exceptional and brilliant students. Within an advanced academic program, students deeply explore topics of interest to complete interdisciplinary projects.

Our mission is to prepare students for college and career success by developing the skills, knowledge, and attitudes necessary to thrive in a rapidly changing world. We are committed to providing a high-quality education that is personalized, project-based, and competency-focused.

We offer project-based learning, driven by student interest and exploration, alongside a core curriculum of discussion-based learning. Students work towards mastery of core and advanced competencies, and create a large portfolio of real work.

Barefoot Technology Academy was founded in 2026, and was accredited by WASC in 2027.

Competency Scores

We follow a slightly modified version of the Valid Assessment of Learning in Undergraduate Education from The American Association of Colleges and Universities (AACU) to assess student progress.

Students are held to high academic standards and are expected to work at an undergraduate level by the end of their time at Barefoot Technology Academy.

Students are assessed on their mastery of core and advanced competencies. Competencies are assessed through projects and defended to a panel of experts during the student's Portfolio Defense.

The scores are weighted based on what grade the student was in when they completed the project, with higher weight given to higher grade levels.

A score of 1 represents basic high school level work and an emerging competency, 2 represents good high school level work and a developing competency.

A score of 3 represents advanced high school level work and proficiency in the competency, and a score above 4 represents undergraduate level work and mastery of the competency.

Project-Based Learning

Projects are opportunities for students to ask big questions, tackle real problems, and create something that matters. During project work, students practice essential skills, gain content knowledge, and demonstrate mastery of our core and advanced competencies.

Every project results in a tangible artifact, which could be a research paper, an app, a documentary, a simulation, a public event, or something entirely original.

Throughout the year, students work on 2–6 projects at a time, ranging in scope from short 6-week explorations to ambitious year-long undertakings. Some are independent; others are collaborative group efforts.

For each major project, students deep dive into content research and understanding. In collaboration with a mentor, they develop a full curriculum for their self-study.

By senior year, projects are expected to demonstrate undergraduate level work and mastery of relevant Core and Advanced competencies.

Core Classes

Core Classes are socratic seminars in literature, philosophy, SEL, skill development, and computer science, designed to complement the project-based curriculum.

In the Literature Circle, students do thematic study of linked texts, spanning Shakespeare to Orwell to Kafka. In Idea Lab, students study great philosophical and ethical questions and explore world religions.

In Community Forum, students gain life skills in participatory democracy, digital citizenship, social and emotional learning, and career/college readiness.

In Tool Kit, students explore key skills in research, presentation, project management and leadership. In Tech Studio, students learn coding languages and technical platforms, guided by their interests and needs.

Students also complete at minimum 4 classes at Arizona State University, spanning math, science and engineering.