

Course Title: AP4CTE AP Seminar: Building a Dynamic Workforce

Subtitle: Research Strategies for Innovating and Problem-solving Across Career Paths

Purpose Statement

Career Technical Education pathways provide students with direct and practical skills, building a bridge between high school and post-secondary education and career plans. AP4CTE is a nonprofit providing open-source educational resources to schools looking to join CTE programs and AP coursework for their student populations. Doing so provides students equal access to high-level programs for career *and* college readiness. This puts students in the unique position to not only *do* the work of industries but also to innovate, collaborate, and problem-solve through critical thinking, research, and the design of products and systems which address *real*, emerging needs in today's workplaces. Students will be able to advance through pathways to completion while also receiving *The College Board AP* credits, allowing them to be competitive future career and college applicants.

This document provides the basic template for applying the broadly multi-disciplinary coursework of the College Board's AP Seminar to established CTE program pathways. Doing so allows students to develop practical skills in career pathways while developing deeper research skills in emerging problems within those career paths to participate meaningfully in and contribute to the industry. Examples of CTE pathway curriculum, as specifically applied and supplemented by the AP Seminar research curriculum below, follow in this document.

Introduction to *The College Board's AP Capstone Program*

AP Capstone is a two-year, skills-based interdisciplinary program developed by *The College Board*. Both years of the program are meant to supplement and enhance the learning already happening in and between the various subject-based AP courses and other content-based programs in secondary schools. The two-year program combines research and analytic skills, critical thinking and reading, and an inquiry-based model where students delve deeply into special topics of college and career relevance, providing a place to focus on areas of personal interest. *The College Board* approach to the program rests heavily on the QUEST method: **Q**uestion and explore, **U**nderstand and analyze, **E**valuate multiple perspectives, **S**ynthesize ideas, **T**eam/**T**ransform/**T**ransmit—in the process, students investigate real and academic problems through a variety of lenses, including cultural and social outlooks, philosophical and ethical approaches, political examples, historical events, economic impacts, scientific/mathematical/medical practices, artistic mediums, and so on.

Students who complete both years of the program will have significant bodies of work in their areas of research, which may provide them access to college and career internships and further research opportunities and can be used for scholarship applications at the collegiate level. Students who complete both years of the program with passing AP scores for AP Seminar (year

1) and AP Research (year 2) will receive an AP Seminar and Research Certificate through *The College Board*, signifying successful program completion. Additionally, students who do so *and* successfully pass (score a 3 or better) in any four *other* AP exams (not subject-specific) also qualify for the AP Capstone diploma; this signifies exemplary academic achievement and college skill-readiness.

AP Seminar (Year 1)

AP Seminar is a year-long preparatory course that serves as the prerequisite to year two, AP Research. The content of the course is flexible, taking on a multi-disciplinary, cross-curricular approach to inquiry-based learning, which makes it an easy companion to CTE Pathways. The course is designed to showcase for students the overlapping nature of the content knowledge of their content-based courses while also introducing skills for analysis, interpretation, and evaluation of technical and complex argumentation and preliminary research practices consistent with the problem-solving and skill-based approaches in CTE programs. Over the course of the year, students are expected to complete the following high-stakes tasks:

- Task 1: Team Project and Presentation (20% of AP Score)
Includes IRR (Individual Research Report) and Team Presentation and Oral Defense
- Task 2: Individual Research-based Paper (35% of AP Score)
Includes IWA (Individual Written Argument) and Individual Presentation and Oral Defense
- End-of-course Exam (45% of AP Score)
Includes Argument Analysis (Part A) and Written Argument (Part B)

AP Research (Year 2)

AP Research is a year-long student-led development of personal inquiry and culminating study of individual student cross-curricular. Students design, develop, and implement research methodologies addressing a critical gap in current research literature with the help of personal, peer, advisor, and expert mentorship. The program goal is student ownership in their learning while also giving them space to contribute meaningfully to academic and professional discourse. AP4CTE also allows students to further their technical, career-based skills in the creation of professional designs which provide practical ways of addressing the theoretical issues in the field of inquiry. Over the course of the year, students are expected to complete the following high-stakes tasks:

- Individual Inquiry Academic Paper (75% of AP Score)
Includes 4,000-5,000-word paper backed by literature from the field, a replicable methodology, and students' drawn conclusions and implications of their findings
- Presentation and Oral Defense (25% of AP Score)

Includes a 20-minute audience-centered presentation design in front of an academic panel, with an oral defense

Students in AP Research CTE programs can align project goals to the goals of the pathway's culminating projects in which students should be actively implementing skills from CTE courses in alignment with real-world problems in the relevant industries. In this way, students of CTE programs will not only learn the skills necessary to complete tasks within those career paths but also be able to innovate and problem-solve in dynamic, meaningful, and progressive ways.

Introduction to the AP4CTE Thematic Focus: An Overview

Writers throughout the modern age have looked for ways to define and dissect the ubiquitous concept of "The American Dream." Much of the prevailing sentiment narrows down to the desire for Home (both owned and lived in) and the desire for meaningful *Work*. In 1973, American poet and activist Marge Piercy published her poem, "To be of use" echoing such a sentiment:

*The people I love the best
jump into work head first
without dallying in the shallows
and swim off with sure strokes almost out of sight.
They seem to become natives of that element,
the black sleek heads of seals
bouncing like half-submerged balls.*

*I love people who harness themselves, an ox to a heavy cart,
who pull like water buffalo, with massive patience,
who strain in the mud and the muck to move things forward,
who do what has to be done, again and again.*

*I want to be with people who submerge
in the task, who go into the fields to harvest
and work in a row and pass the bags along,
who are not parlor generals and field deserters
but move in a common rhythm
when the food must come in or the fire be put out.*

*The work of the world is common as mud.
Botched, it smears the hands, crumbles to dust.
But the thing worth doing well done
has a shape that satisfies, clean and evident.
Greek amphoras for wine or oil,*

*Hopi vases that held corn, are put in museums
but you know they were made to be used.
The pitcher cries for water to carry
and a person for work that is real.*

This idea isn't uniquely American, though; today's students worldwide are overwhelmingly echoing this sentiment. Providing meaningful skills to the workplace and having earnings reflect that worth to society are both desired products of their hard work as students and civilians in today's global market. However, it is also widely acknowledged that today's work is *dynamic*, and to do well today requires workers to be able to think, problem-solve, and teach themselves beyond the basic job description. Today's global market *is* multi-disciplinary and not just based on efforts during the specified workday but on the ability to seek opportunities to develop new ways of innovating.

This course will provide students not only a way to continue learning the basic skills of their desired career-technical pathway but also the basic research skills needed to seek out real-world issues in the workplace. Course content will simply introduce issues broadly across the history of labor in the West, giving students a chance to follow lines of reasoning to more narrowed issues of personal interest. Over the course of the study, students will learn how to develop focused inquiry questions, dissect complex academic and technical published literature, apply research to synthesized responses, collaborate with peers to tackle research projects, and present focused arguments in light of the research to an audience of academic peers.

Module 1: Introduction to Capstone, AP Seminar

Suggested Time: 1 week

This module will introduce students to the basic breakdown of the program, with specific emphasis on year 1, AP Seminar objectives. Students will receive official The College Board materials, course information and overviews, basic course design and objectives, assignment and grading process, and overall discussion of the special topic.

Suggested Content: reflections on the American Dream and our relationship to Work

- poem, "To be of use"
- Aphorisms from Franklin's ***Poor Richard's Almanack***
- John Steinbeck's "Paradox and Dream"

Assessments: theme brainstorming; personal research philosophy reflections, student portfolio creation (on-going work throughout the school year)

Module 2: Reading Complex Texts--Introduction to Argument Analysis

Suggested Time: 2 weeks

In this module, students will begin to interact with primary literature across publication types with the express purpose of identifying major features of the argumentative structure. The focus will be strictly on identifying major claims and supporting evidence as students are taught basic forms of argumentative logic using processes and aids such as argument mapping.

Suggested Content: Philosophy of Productivity in American Culture

- Selections from Richard Baxter’s ***Christian Directory*** (on Labour, and on Time)
- Selections from Adam Smith’s ***Wealth of Nations***
- Selections from Henry Ford’s ***My Life and Work***
- [Assessment text] article, “Remote working is a ‘mixed bag’ for employee well-being and productivity, study finds” by University of Cambridge published on *Vox.com*

Assessments: Argument maps; Argument Analysis formal response (1-2)

Module 3: Source Evaluation—Finding the Right Research for the Question

Suggested Time: 2-3 weeks

In this module, students will layer an additional interaction to their textual reading beyond identifying argument structure. The focus will be on evaluating the strength and effectiveness of an argument’s provided evidence and the credibility and authority of the author or source citations. Students will be introduced to the expectations for evaluating different *types* of texts, using strategies such as RAVEN for expository arguments (built upon prior assessment text) and OPTIC for artistic representations (new assessment for this module). Students will then be provided with a sample research question within the given source content and will be asked to supply researched sources in annotated bibliography form, which will include rationalized justification for source selection (“purposeful use”) using evaluation techniques

Suggested Content: Acknowledging the Criticisms of “Work”

- Selections from Max Weber’s ***The Protestant Ethic and the Spirit of Capitalism***
- Selections from Erich Fromm’s ***Sane Society***
- Selections from Hannah Arendt’s ***Human Condition***
- Selections from Aldous Huxley’s ***Point Counter Point*** (walkthrough text, with a discussion using selections from ***Brave New World*** and ***Island***)
- [Assessment ‘text’] art piece, Diego Rivera’s 1928 mural “The Arsenal”

Assessments: Argument Analysis formal responses (1-3) for artistic ‘text’; Sample Research Question Annotated Bibliographies (with source rationale)

Module 4: Engaging in Inquiry—Building and Narrowing Research Topics

Suggested Time: 2 weeks

Module 4 is meant to begin to simulate the stimulus material process echoed in AP Seminar formal tasks (specifically, Task 2 and Exam Part B). *The College Board* stimulus materials for AP Seminar generally correlate around a broad central theme. However, more focused and

nuanced thematic connections can also be synthesized between the 4-7 given sources (dependent on the task). Previous modules have provided the theme and have deeper scaffolding in the sense that the teacher is leading students through *each* selection and is tasked with explicitly weaving the narrative for students. Here, students will build deeper narrative connections themselves. Module 4 provides students the basis for in-class ownership in textual and artistic analysis and then asks them to collaboratively brainstorm inquiry questions *inspired by* and *situated in* the provided stimulus materials. This module will introduce students to building and evaluating questions, engaging lenses and perspectives for further inquiry, and eventually building research purpose statements and informal research plans but will stop short of fully engaging the research process.

Suggested Content: Workplace Dynamics

- [Assessment text] selections from Karl Marx’s ***Communist Manifesto***
- [Assessment text] selections from Upton Sinclair’s ***The Jungle***
- [Assessment ‘text’] film, Fritz Lang’s ***Metropolis*** (1927)
- [Assessment text] poem by W.H. Auden, “The Unknown Citizen”
- [Assessment text] article, “Increased Remote Work Could Mean Big Changes for Cities” published by *the American Planning Association* (2021)
- *Assessment texts (practice source for timed Part A should come directly from articles and studies specific to CTE pathway(s):*
 - *Note that articles related to subject matter can and should be updated often, especially as major political and social shifts occur, or as major events impact the overall theme (also note that these are suggested texts and can be shifted to align specifically to CTE pathways and skills.*
 - [sample Part A source] article, “The cult of compulsory happiness is ruining our workplaces” opinion piece published by *The Guardian* (2016)

Module 5: Foundations for Collaborative Research—Research Reporting

Suggested Time: 4-5 weeks

In Module 5, students will begin to engage in research collaboration, setting and establishing group norms and responsibilities, recognizing the process of discussion and compromise in group research that goes beyond simple task-delineation. Groups will establish their strengths, weaknesses, and expectations, collaborate on an inquiry question based on the given stimulus materials, and select lenses and perspectives for each unique group member. Individually, students will investigate their lens and engage in multiple perspectives on their way to completing annotated bibliographies. This task serves to practice research skills from the guided practice of Module 3 and adds the dynamics of collaboration and further narrowing in Module 4. Module 5 *further* extends to new skills, including writing literature reviews, introducing proper publication formatting (MLA, APA, Chicago), and culminating in response reflections looking for areas of agreement and disagreement across lenses and perspectives in the group. This will eventually lead to a single collaborative statement, which will be the first step of Module 7 when students return to this content for the sake of group argumentation and

presentation-building (thus, completing a full practice of Task 1 and many of the overlapping skills of Task 2).

Suggested Content: Humanity and Technology—Good, Bad, Ugly

- [Assessment text] Selections from Henry David Thoreau’s *Walden*
- [Assessment text] study, “Design and Development of Virtual Reality-Based Mobility Training Game for People With Parkinson’s Disease” published in *frontiers in Neurology* (2021)
- [Assessment ‘text’] TEDx lecture, “The danger of AI is weirder than you think” (2019)
- [Assessment text] article, “Computers Do Not Make Art, People Do” published by the *Association for Computing Machinery* (2019)
- [Assessment text] article, “Beyond Asimov: The Three Laws of Responsible Robotics” published by *Human-centered Computing* (2009)
- [Assessment ‘text’] audio news (with transcript), “A Ukrainian Twitch influencer’s community rallied around him when Russian invaded” aired by *NPR* (2022)
- [Assessment text] study, “The collaborative work experience of robotics and human workers in the automobile industry in South Africa” published in the *African Journal of Science, Technology, Innovation and Development* (2020)
- *Can substitute sample texts of articles and studies specific to CTE pathway(s)*

Assessments: Group Formal Research Proposals (with inquiry question, research plans, and collection of individual annotated bibliographies); Individual Literature Reviews (with rubric feedback); informal responses and collaborative statements

Module 6: From Evaluating to Enacting—Building Arguments

Suggested Time: 2 weeks

To build on previous skills of leading to reviews of relevant literature, students will be introduced to formal argumentation meant to engage the skills of both Task 2 and Part B of the Final Exam. As will be the case with Part B of the AP Exam, Module 6 will provide students with four sources around a broad theme, engaging a variety of minor perspectives and different subject matter. Students will engage in class discussion of each source and will be guided through building research questions using methods learned in Modules 4 and 5. Students will then be introduced to various argument structures (e.g., Toulmin, Rogerian, and Classical) and strategies for selecting a structure based on the argument’s claims and supporting evidence. Students will then produce guided outlines of such an argument built on the provided stimulus. This activity will be timed to give students direct practice with the expectations of the end-of-course Exam. This module will fall just short of full engagement with Task 2, which repeats the additional research skills practiced in previous modules. It should be noted that students will engage in additional research, which will be synthesized into the stimulus materials provided by *The College Board* during the high-stakes task (see Module 9). However, by this time, students will have already sufficiently engaged in practice research and will utilize the

argumentation structures in Module 7 for their practice group presentations based on the research of Module 6.

Suggested Content: Boredom—Human Creativity or Destructiveness

- Selections from Albert Camus' *The Myth of Sisyphus*
- Selections from Søren Kierkegaard's *Either/Or* (from "The Rotation Method")
- TEDx lecture, "The 4 superpowers of design" (2017)
- article, "Why Neuroscientists Say, 'Boredom Is Good For Your Brain's Health'" published by *Forbes* (2020)
- *Assessment texts (practice sources A-D for timed Part B should come directly from articles and studies specific to CTE pathway(s), for example):*
 - [sample Source A] selections from Carl Jung's *Four Archetypes*
 - [sample Source B] article, "The Gamification of EdTech: Virtual Learning On The Road To The Metaverse" published in *Forbes* (2022)
 - [sample Source C] Robert Frost's "The Road Not Taken"
 - [sample Source D] article, "We All Have 'Main-Character Energy' Now" published in *The New Yorker* (2021)

Assessments: Practice Part B (timed) Argumentative Essay

Module 7: Presenting to Peers—Audience-centered Design

Suggested Time: 2 weeks

Students will return to the collaborative research collected in Module 5 and use what they learned about argument structures in Module 6 to build an audience-centered presentation of their group findings for this module. Students will learn about audience-centered design, which will introduce students to the dynamics of tailoring the claims and evidence to an audience of (educated) peers. To do so, students will be led through the process of creating an audience profile and then will engage in selection strategies based on the profile. Students will make slide decks requiring a choice of content and organization. They will also learn design and delivery techniques through modeling. Students will then do a practice run of their presentation (in the spirit of both Tasks 1 and 2) of 8-10 minutes, with rubric feedback. Students will also be introduced to oral defense and will prepare response reflections prior to the practice presentation in class.

Suggested Content: Return to the theme, assigned texts, and compiled research of Module 5

Assessments: presentation slides; in-class practice presentation delivery (with rubric feedback); oral defense reflections

Module 8: High-stakes Task 1

Suggested Time: 6 – 8 weeks

Module 8 begins students' official high-stakes tasks per *The College Board* requirements and for official scoring. At this time, the teacher becomes a mentor, guide, and project manager for students as they make decisions, plan, and execute the skills learned and developed over the

first seven modules. Task 1 is a collaborative task; students will be in groups of 3-5 and generate their own inquiry topics and overall research question before exploring individual lenses and perspectives more narrowly, engaging the group inquiry. Students will write literature reviews for their IRR (Individual Research Report) of 1200 words in a formal standard format, integrating research on the topic lens. Students will then compile all research for the group to synthesize an argumentative perspective on the original (or revised) group inquiry question, which will be argued and supported in an 8-10 minute presentation of audience-centered design and reflected in students' oral defenses. Students will submit the IRR to *The College Board's* digital portfolio, and teachers will receive training and certification in order to submit scores for the group presentations. This task, overall, is worth 20% of students' composite score for AP Seminar.

Suggested Content: must be student-generated (though can be inspired by previous modules)

Assessments: Task 1 IRR and Collaborative Presentations (20% of formal AP Seminar Score)

Module 9: High-stakes Task 2

Suggested Time: 8 weeks (The College Board requires a minimum of 30 school days for Task 2 writing and planning; presentations must take place outside of the 30 days)

This module guides students through the second of the official high-stakes tasks per *The College Board* requirements and official scoring. Task 2 stimulus materials will be posted in AP Classroom and the digital portfolio for students. This task requires students to view and consider the provided materials collected around major broad themes. Students may discuss the materials and themes broadly but must then select a theme advanced strongly between *at least* two of the provided materials. This theme becomes the basis of inquiry, in which students will continue to investigate and research further. Students will then complete the IWA (Individual Written Argument) of 2000 words in a formal standard format, which will go a step further than the Task 1 paper. Task 2 considers the literature but *also* advances a claim and uses the research to support it. Students *must* successfully and deeply integrate at least one of the stimulus material sources in their collected research and argument. Students will then individually share their findings in a 6-8 minute audience-centered presentation and reflective oral defense. As in Module 8, students must submit their written work to *The College Board's* digital portfolio, and teachers will submit presentation scores. This task, overall, is worth 35% of the student's composite score for AP Seminar. *[Note: the end-of-course exam is worth 45% and relies heavily on the skills developed throughout the course and further demonstrated by the official tasks.]*

Suggested Content: stimulus materials provided by *The College Board*

Assessments: Task 2 IWA and Individual Presentations (35% of formal AP Seminar Score)

As was true of Task 1 as well, the teacher’s role in Task 2 continues to be that of project manager and mentor, as teachers are no longer providing direct and specific feedback, per The College Board regulations. See teachers’ roles and responsibilities for the list of what is allowed or prohibited once the tasks begin. This information can be located in the course and exam description handbook. Student Evaluation and grading will continue to be based in progress and project management, as was the case in Module 8, Task 1.

AP Seminar, Formative and Summative Assessments: Suggestions

Below is basic information about *some* suggested assessments for the modules outlined above. AP4CTE Seminar teachers may choose to integrate pathway and career-technical components throughout as related to particular skills-readiness tasks. Examples of such integration can be seen in the example curriculum guide provided in addition to this overview.

Technical Reading Questions and Reflections

AP Seminar introduces students to academic and professional literature that is complex, argumentative, and methodological. Some texts may stretch students beyond the typical reading of the literary and textbook materials in their other courses. As a result, it is expected that students will need to develop reading strategies for expository reading while also developing practice in developing inquiries. Technical Reading Questions and Reflections assignments ask students to record and further develop questions for discussion as they emerge in their active readings of the texts. Once questions are developed, students should reflect and respond to their own questions. These reflections should be relatively informal but should explore the depths of the reading, the difficulties emerging as they lead to the student’s question(s), and note the complexities, relevant interpretations, implications, etc. These questions and reflections serve as preparation for discussions of the texts in a class setting and also serve as good practice for developing the kinds of curiosity that lead to good research questions for tasks later on.

Argument Analysis and Evaluation

One of the most important skills of *The College Board’s AP Capstone* program is based on the formal analysis and evaluation of arguments formed on the basis of clear evidence. These are the skills that students are expected to acknowledge in published literature and then meant to replicate in their own high-stakes task writing. They are assessed most directly in Part A of the End-of-course Exam but are the foundations of all other tasks; these skills must be continually practiced, refined, and explicitly acknowledged throughout the year-long course. Ultimately, students will be able to address the following (for Part A of the End-of-course Exam, per language taken directly from The College Board AP Seminar testing materials) for any written argument, including their own:

- Identify the author’s argument, main idea, or thesis

- Explain the author's line of reasoning by identifying the claims used to build the argument and the connections between them
- Evaluate the effectiveness of the evidence the author uses to support the claims made in the argument

Various aspects of the skills can be assessed to different degrees of formality, in isolation, or in conjunction. Assessment can be done during in-class discussions or take the form of written, timed 'quizzes' that simulate the experience of the End-of-course Exam. This can also be seen in Argument Mapping activities, which invite students to engage in a visual representation of the argument to provide another layer of understanding of published texts. And provide a way to visualize their thinking when building their arguments from research-based evidence.