

## Advanced Placement Capstone Research 2019-2020

This course is a college-level class and students are expected to behave accordingly.

### Generative Risk Taking and Smart Failure

This course is an opportunity to explore ideas and take risks. It is an opportunity to learn that failure is a necessary feedback component for improvement. This course continues the recursive inquiry pedagogical framework of the AP Seminar course (QUEST); the goal of which is to teach students to internalize the habits of a researcher. This means that a researcher's initial ideas typically need consistent refinement and often evolve significantly throughout the research process. Students must be committed to this process of feedback and improvement to gain the maximum benefit this course offers.

### Course Description (from College Board's Course and Exam Description 2016)

*AP Research, the second course in the AP Capstone experience, allows students to deeply explore an academic topic, problem, issue, or idea of individual interest. Students design, plan, and implement a yearlong investigation to address a research question. Through this inquiry, they further the skills they acquired in the AP Seminar course by learning research methodology, employing ethical research practices, and accessing, analyzing, and synthesizing information. Student reflect on their skill development, document their processes, and curate the artifacts of their scholarly work through a process and reflection portfolio (PREP). The course culminates in an academic paper of 4000-5000 words (accompanied by a performance, exhibit, or product where applicable) and a presentation with an oral defense.*

### Reference Textbook

**Reference Text:** *The Bedford Researcher*, Palmquist, Bedford/St. Martin's 2015 (optional purchase)

### AP Assessment

College Credit qualification for the AP Research is assessed and awarded based on the academic paper and the culminating presentation. The academic paper is scored by the College Board and the presentation is scored by the course instructor.

Academic Paper – 75% of AP Score

Presentation and Oral Defense – 25% of AP Score

Please see the College Board website and the admissions websites of your preferred universities for more specific information on college credit.

### Technology

This course will utilize the capabilities of the online course management system (CMS), *Canvas*, and the web-based communication app, *Remind*. More details provided in class.

### Important Course Milestone Date and Deadlines

October 15	Initial Inquiry Proposal Form (IPF) due
November 15	Final (IPF) and Institutional Review Board (IRB) documentation due
November 19-20	IPF Final Approval Notifications to students
	NOTE: Any students who miss this deadline or are denied final approval must have a conference, including parents, with Mr. Vaughn and/or Ms. King before moving forward with their planned research.
December-January	Research: Conduct Research
February-March	Write: Academic Paper and Presentation
March 17	Final Academic Paper and Presentation Slides due
March-April	Presentations (dates and location TBD)

### Weekly and Bi-weekly Activities

- PREP Assignments: the PREP will include specific assignments posted on Canvas as well as any necessary information as determined by the student researcher (weekly)
- Map the Gap: small group whiteboard presentations on individual knowledge gaps and research gaps (biweekly)
  - The expected outcome of this activity is to continually evaluate and reflect on gaps in knowledge and address feedback from multiple perspectives
- Body of Knowledge (BoK) Barometer: one minute summary of current BoK (biweekly)
- Work In Progress (WIP) Interviews: one-on-one dialogues to evaluate research progress (less frequent beginning to weekly)
- Peer Research Networking Group: interdisciplinary online (Canvas) discussion groups beginning Week 20

## AP Research Course Units

### Unit ONE (Weeks 1-4): Intro to Research

PREP: all notes for Unit ONE should be recorded

- Big “R” vs. Little “r” Research—building on the AP Seminar foundation
  - Moving from curiosity to scope and feasibility
- Reasoning Skills: Situating Self at Different Scales
  - Research Application Extension: Situating Interest in Discipline
- Research Topic to Research Question and Back
  - Predicting RQs from Sources
  - Problem Statements
  - RQ Funneling Practice (minimum 3 broad topics): Broad Topic, Narrowed Topic, Focused Topic, Hypothesis, RQ
    - Focusing Factors: Lens/perspective, population, geography, time, resources
    - Students presentations to class on RQ funneling with peer questions
- Developing a Body of Knowledge
  - Identifying Parts of Research Text
    - Identifying origins and applications of variety of research texts
  - Evaluating Sources: CRAAP Practice—AP Seminar to AP Research usage
  - Discipline Specific Citation—Style Guide Comparison
  - Correlation vs. Causation—Bradford Hill Criteria
  - Outlining Arguments and Identifying Bias
    - Students assigned one of five different articles in class with 20 minutes to read and develop 1-minute presentation identifying author(s) claims, line of reasoning, and potential bias
  - PREP: Competing Claims Within Field/Discipline: Evaluating evidence from two competing claims
    - What is the value of multiple perspectives within a field of inquiry?
  - Finding the Gap(s)
  - Foundational Texts and Supporting Texts

### Unit TWO (Weeks 5-15): Research Type, Design, and Method

- Plagiarism and Falsification in Research: Examples
  - CB Policy Review
  - Overview of Ethical Research Practices
    - Students will complete CITI Training through NC A&T website (details given in class)
    - CITI Training due: Nov 4
    - Class discussion of ethical research practices Wed. Nov 7 with application to specific scenarios provided in class
- PREP: Annotated Bibliography and Literature Review—using the AP (6-8 source min) to develop an LR
- PREP: Reasoning Skills and Hypothesis
  - Building from hypothesis to RQ
  - Using hypothesis to direct BoK development
- Peer Oral Defense Panel—Hypothesis, RQ, Reasons, Necessary Data, Foundational Sources (Acad. Paper Intro)
  - PREP: reflection on OD Panel
- Primary vs. Secondary Research
  - Class discussion
- PREP: Understanding Research Design
  - Reading and Class Discussion
  - Practice: Predicting design from hypothesis
- Understanding Research Methods
  - Reading and Class Discussion
  - Practice: Predicting method from hypothesis
- Peer Oral Defense Panel—Mock IPF and IRB review Process
  - Students will present Mock IPF to class and field questions from panel of 3-5 peers
  - PREP: reflection on IPF presentations and panel
- IPF Question Discussion: What is the value of your research?
  - Students will present this IPF question to the class for feedback
- Official IPF Approval and IRB Review (Nov. 20)
  - PREP: Record of IPF approval and IRB decision recorded

### Unit THREE (Weeks 16-19): Clarifying Research

- Final Literature Review (15-20 sources)
- PREP: Clarifying Research Design and Method

- PREP: Research with End in View: Effective Notetaking/Recording for Academic Paper
- Peer Oral Defense Panel—Design and Method peer questioning
  - PREP: reflection on panel

#### Unit FOUR (Weeks 20-28): Conducting Research

- Students will primarily be conducting research in this unit
- In addition to regular PREP work and WIP interviews students will be assigned to a Peer Research Networking Group for regular online discussions/reflections on the research process including peer review of initial Academic Paper drafts. The notes for these activities should be kept in PREP.

#### Unit FIVE (Weeks 29-31): Academic Paper and Presentation

- Focused Writing Period and Presentation Practice
  - Presentation Peer Reviews and Peer Oral Defense Panels
  - PREP: reflections on these feedback activities due within 2 days of performance

#### Final Symposium

- In-class Symposium: students will celebrate completion of AP Research coursework with modified presentations of their research and reflect on the impact of their findings both for their field of inquiry and for their future personal/academic interests
- Final Written Reflection

### Research and Expert Advisors

AP Research differs from AP Seminar in that students move from comparing and communicating the ideas of other researchers to “finding the gap” in the current body of knowledge (BoK) and conducting research to explore and make unique conclusions concerning that “gap.” Students are encouraged to consult with an expert advisor in the field. Students are responsible for contacting and meeting consistently with advisors but advisors must be initially vetted and approved by the STEM Early College. Students cannot change advisors without instructor’s approval. Records of communication with expert advisors should be kept in PREP.

### Classroom Policies and Procedures

**Academic Integrity:** Per GCS policy, students shall not engage in any act of deception or falsification of work product. This includes cheating by receiving any unauthorized aid or assistance or the actual giving or receiving of unfair advantage on any form of academic work, plagiarism by copying the language structure, idea and/or thought of another and representing it as one’s work, and verbal or written statement of untruth.

#### **AP Capstone Plagiarism and Falsification or Fabrication of Information Policy**

*Participating teachers shall inform students of the consequences of plagiarism and instruct students to ethically use and acknowledge the ideas and work of others throughout their course work. The student's individual voice should be clearly evident, and the ideas of others must be acknowledged, attributed, and/or cited.*

*A student who fails to acknowledge the source or author of any and all information or evidence taken from the work of someone else through citation, attribution, or reference in the body of the work, or through a bibliographic entry, will receive a score of 0 on that particular component of the AP Seminar and/or AP Research Performance Task. In AP Seminar, a team of students that fails to properly acknowledge sources or authors on the Team Multimedia Presentation will receive a group score of 0 for that component of the Team Project and Presentation.*

*A student who incorporates falsified or fabricated information (e.g. evidence, data, sources, and/or authors) will receive a score of 0 on that particular component of the AP Seminar and/or AP Research Performance Task. In AP Seminar, a team of students that incorporates falsified or fabricated information in the Team Multimedia Presentation will receive a group score of 0 for that component of the Team Project and Presentation.*

Source: <https://apcentral.collegeboard.org/courses/resources/ap-capstone-policies>

**Attendance:** Students are expected to attend a minimum of three hours of scheduled time each week. Sign in documents will be used to keep track of adherence to this policy. Students will likely require more than this to adequately complete the course. Open “office hours” will be offered for student work time and conferences with Mr. Vaughn and/or Ms. King.

### Grading

This course adheres to the GCS grading scale listed in the student handbook.

GCS Quarter Weights for Year-long Courses: Q1 20%, Q2 20%, Q3 20%\*, Q4 20%, Final Exam 20%

\*Due to the structure and timeline of the AP Research Course, Quarter 3 assignments will be fewer in number than other Quarters and consist primarily of participation and checkpoint assignments designed to maintain consistent work on both the academic paper and the presentation. Parents and students should be aware that grades in this Quarter may be updated less frequently than other Quarters. Parents should email the instructor at any time for detailed feedback on student progress, participation, and skill acquisition.

Student grades in this AP Research course are calculated on a total points system. Assignments typically range in value from 1 point to 25 points. Assignment point values reflect the frequency, complexity, and time required for completion.

### **OPEN DOOR POLICY**

We are here to help and we enjoy doing so. It is much easier for us to help you succeed if you come to us early when a concern surfaces rather than later. We expect AP students to initiate communication with us early and often rather than relying solely on their parents to do this for them. If we cannot provide assistance, we will find someone who can.

### **Materials Needed:**

- Three Ring Notebook—recommended minimum of 1.5 inches
- Pens: Blue and black ink **ONLY**
- Composition notebook for PREP
- Evernote for PREP
- Other materials may be required as we progress throughout the year