



USPAS Policy on the Use of Artificial Intelligence (AI)

The U.S. Particle Accelerator School (USPAS) recognizes that generative artificial intelligence (AI) tools can be powerful aids for learning, research, and productivity. To ensure academic integrity and the achievement of core learning objectives, the following policy is established:

1. Instructor Authority and Discretion

Because learning objectives and assessment methods vary across the curriculum, the authority to determine if, when, and how AI tools may be used rests solely with the individual instructor or instructor team. This policy may differ between courses or even between specific assignments within a single course.

2. Default Prohibition

Unless an instructor explicitly grants permission for a specific task or assignment, students must assume that the use of generative AI is prohibited. All submitted work is expected to be the original product of the student's own effort.

3. Disclosure and Accountability

When AI use is permitted, students are expected to adhere to the following standards:

Transparency: Students must clearly disclose the use of AI tools, specifying which tools were used and the nature of their contribution (e.g., brainstorming, proofreading, or data analysis).

Verification: Students take full responsibility for the content they submit. AI-generated outputs can be inaccurate, biased, or include fabricated data. The use of AI does not excuse errors or "hallucinations" in technical work.

Proper Attribution: Any AI-generated text, code, or imagery must be cited according to the instructor's preferred style guide.

4. Academic Integrity

Presenting AI-generated content as one's own original work without disclosure is a form of academic dishonesty. Violations of an instructor's AI policy will be treated as academic integrity violations and handled according to established USPAS procedures and the USPAS Code of Conduct.

5. Data Integrity and Technical Accuracy

The USPAS curriculum involves high-precision calculations, simulations, and experimental data analysis. While AI tools can assist in these processes, the following standards for data integrity must be strictly maintained:

Prohibition of Data Fabrication: Students are strictly prohibited from using AI to generate, "fill in," or extrapolate experimental data points, physical constants, or simulation results that were not actually observed or calculated through legitimate scientific methods.

Mandatory Verification of Technical Outputs: Generative AI is known to produce "hallucinations"—scientifically plausible but factually incorrect formulas, code snippets, and citations. Students are required to manually verify every technical output (e.g., a TeX formula, a Python script for beam dynamics, or a hardware specification) against trusted primary sources before submission.

The "Human-in-the-Loop" Requirement: AI may be used as a supplement to, but never a replacement for, student reasoning. Any result produced by an AI tool must be accompanied by the student's own derivation or a logical explanation of why the result is physically sound.

Accountability for Errors: "The AI provided an incorrect value" is not a valid defense for technical errors in submitted work. Students assume full professional and academic responsibility for the accuracy and scientific validity of all content in their assignments.

Disclosure of Algorithmic Processing: If an instructor permits the use of AI for data processing or visualization, the student must be ready provide the specific prompt or script used if requested, ensuring the process is transparent and reproducible by others.

Procedures for AI Policy Violations

1. Initial Faculty Review & Documentation

If an instructor suspects a student has used AI in violation of course policy (e.g., through AI detection software, sudden shifts in writing style, or technical inaccuracies common to AI "hallucinations"), they should:

Document the evidence: Save the student's submission alongside any detection reports or specific examples of suspicious content.

Pause grading: Temporarily withhold the grade for the specific assignment while the inquiry is pending.

2. Preliminary Inquiry (The "Teachable Moment")

Before filing a formal report, the instructor should meet privately with the student (in person or virtually).

Purpose: To allow the student to explain their process. The instructor may ask the student to explain specific technical choices or "walk through" the logic of the code/text.

Outcome A (Resolved): If the student demonstrates the work is their own or the use was a misunderstanding of a permitted tool, the matter is closed.

Outcome B (Admission): If the student admits to unauthorized AI use, the instructor may apply an academic sanction (e.g., redo the assignment for partial credit) or proceed to Step 3 for more serious violations.

Outcome C (Disputed): If the instructor remains convinced a violation occurred and the student denies it, the case must be escalated to Step 3.

3. Formal Reporting to the USPAS Director

In accordance with the USPAS Code of Conduct, the instructor must report suspected incidents of academic dishonesty to the USPAS Office and/or Director. The report should include:

The course AI policy (from the syllabus).

The student's work and the evidence of unauthorized AI use.

A summary of the preliminary inquiry meeting.

4. Formal Adjudication

Upon receiving a report, the USPAS Director (or a designated Academic Integrity Committee) will:

Acknowledge receipt: Within two business days.

Fact-Finding: Review the evidence. Because USPAS is a fast-paced environment, the Director will aim to make a determination within 48 hours of receiving the report.

Standard of Proof: Decisions will be based on a "preponderance of the evidence" (i.e., whether it is more likely than not that the violation occurred).

5. Tiered Sanctions

Sanctions should be proportionate to the severity and intent of the violation:

Level 1 (Minor/First-time): A warning and a zero or reduced grade on the specific assignment.

Level 2 (Significant/Intentional): A failing grade for the entire course and a formal letter of reprimand sent to the student's home institution.

Level 3 (Egregious/Repeat): Immediate expulsion from the current USPAS session, forfeiture of scholarship funds/travel reimbursement, and a permanent ban from future USPAS participation.

6. Right to Appeal

Students have the right to appeal a Level 2 or 3 sanction.

Timeline: Appeals must be submitted in writing to the USPAS Director within 24 hours of the decision.

Basis for Appeal: Appeals are generally limited to new evidence or a claim of procedural error (e.g., the policy was not clearly communicated).