**GPAC Assessment Template**

**ANALYSIS: Scientific Reasoning**

Nota bene: The terms goals, learning outcomes, and outcomes are all used interchangeably. They represent what you expect students to know and be able to do once they complete the course.

This document provides information for reporting on a GPAC course that meets the Scientific Reasoning requirement attribute. Please use this as a template to provide details of your plan to assess whether your students are meeting the listed Scientific Reasoning learning outcomes, your findings based on the plan, to reflect on and interpret your findings, and to describe what you have done in response.

As each learning outcome is assessed fill in the Assessment Findings, Interpretation of Findings, and Action Plan columns in Year 1 and the Reflection on the Action Plan in Year II. Departments may include Assessment Findings and Interpretation of Findings again in Year II to complete the Reflection on the Action Plan if needed. Please upload the information in this worksheet as well as the syllabus and any supplementary documents to [caas@gwu.edu](mailto:caas@gwu.edu). Once information is sent to [caas@gwu.edu](mailto:caas@gwu.edu), it will be uploaded to a Box folder, which you will be given access to.

*\*If your course also meets a requirement within the PERSPECTIVE or COMMUNICATION components, please fill out the corresponding worksheet.\**

Instructor (Last name, First name): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Course (Subject, Number, Section): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Instructor Email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Assessment year: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Department: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Department Chair: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

| **GPAC Student Learning**  **Outcome** | **Assessment Plan**   * *Provide information about the measures that you are using to determine if students have achieved the GPAC learning outcome.* * *Explain how this measure relates to the learning outcome.* * *Provide information about when measures were administered (e.g., beginning, middle, or end of semester).* * *Provide acceptable target (e.g., average score of 80%).* * *This should be the plan proposed when course was approved.* | **Assessment Findings**   * *Provide the total number of students assessed.* * *Provide the distribution of scores for each measure.* * *Include a detailed scoring plan or rubric for direct measures and the relevant solutions to the question in the case of quiz / homework / exam.*   *Examples:*   * *X% of students responded that they learned to think critically during the course.* * *X% of students received a 4, X% received a 3, and X% received a 2.* | **Interpretation of and Reflection on Findings**  *Questions to Consider:*   * *What does the data tell you about what and how well students are achieving the GPAC learning outcome for the course? Was the acceptable target met?* * *How do you know that students are achieving learning objectives?* * *In what areas do students have difficulty? In what areas are students excelling?* * *How does the timing of the assessment (e.g., beginning, middle, or end of semester) affect your interpretation of findings?* * *Are there additional comments about your interpretation?* | **Action Plan**  *Questions to Consider:*   * *What changes will you make based on the information you collected to improve student learning?* * *If you are satisfied with your results, to what do you attribute students’ success?* * *Is there another measure that would more appropriately measure this learning outcome?* | **Reflection on Action Plan**  ***This must take place after you’ve taught the course again.***  *Questions to Consider:*   * *What changes did you make to the course to address the objectives in which students are having difficulty? Have these changes been effective in improving student learning? Why or Why not?* |
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|  | **YEAR I** | | | | **YEAR II** |
| **GPAC Student Learning**  **Outcome** | **Assessment Plan** | **Assessment Findings** | **Interpretation of and Reflection on Findings** | **Action Plan** | **Reflection on Action Plan** |
| **1. Understand the hypothetico-deductive method**  *Semester:*  *Year I:*  *Semester:*  *Year II:* |  |  |  |  |  |
| **2. Test hypotheses using data and scientific reasoning**  *Semester:*  *Year I:*  *Semester:*  *Year II:* |  |  |  |  |  |
| **3. Understand how probability theory affects interpretation of experimental results**  *Semester:*  *Year I:*  *Semester:*  *Year II:* |  |  |  |  |  |

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| **4. Understand the difference between causation and correlation**  *Semester:*  *Year I:*  *Semester:*  *Year II:* |  |  |  |  |  |