**Diagnostic Assessment**

A **diagnostic assessment** is a form of pre-assessment or a pre-test where teachers can evaluate students’ strengths, weaknesses, knowledge and skills before their instruction. These assessments are typically low-stakes and usually don’t count for grades. An identical assessment may be given post-instruction to identify if students have met a course’s required learning objectives. With this form of assessment, teachers can plan meaningful and efficient instruction and can provide students with an individualized learning experience. Written by students, the diagnostic assessment is a tool for teachers to better understand what students already know about a topic when submitted before the start of a course. [Diagnostic assessments](https://www.buffalo.edu/catt/develop/design/designing-assessments/diagnostic-assessments.html) are used to gauge where students currently stand, that is intellectually, emotionally and ideologically.

A **diagnostic assessment** refers to an assignment written at the beginning and end of a course. Post-course assessments can be compared with pre-course assessments and can show students’ potential improvement in certain areas. These assessments allow the instructor to adjust the curriculum to meet the needs of current—and future—students.

**What is the purpose of diagnostic assessment?**Educators may facilitate diagnostic assessments to gauge proficiency or comprehension levels before beginning a new learning unit. The purpose of diagnostic assessments is to help identify learning gaps and provide insights into comprehension that can be addressed in future instruction. Diagnostic assessments are designed to measure students’ strengths, weaknesses, knowledge levels and skill sets. These assessments aim to answer: what do students already know about a specific topic?

**What are common diagnostic assessment tools?**There are several methods and tools for diagnostic assessment design. Likert-scale surveys are among the most common tools, where students are asked to choose a ranking from ‘strongly disagree’ to ‘strongly agree’ when reviewing course facts. A more visual diagnostic assessment tool involves concept mapping. Students draw a visual diagram of a concept or piece of information and are asked to form connections between different components of the topic at hand. Discussion boards are a third diagnostic tool. You might ask students to reflect on the questions they have related to an upcoming topic and ask them to reply to a peer’s discussion thread.

**What are diagnostic assessment examples?**The tools and methods used to build diagnostic assessments will likely remain the same no matter your discipline. However, the subject matter you evaluate students on will vary. Here are some [sample diagnostic assessments](https://www.queensu.ca/teachingandlearning/modules/assessments/10_s2_02_diagnostic_assessment.html) across various fields. **Psychology**: Students are asked to visually illustrate the order in which Jean Piaget’s stages of cognitive development take place. **English:**Students are asked to complete a survey examining which of Shakespeare’s texts they have read before and which themes apply to each play. **Chemistry:**Students review and complete a checklist of all the necessary steps they must take before completing a chemical experiment in the lab. **Economics:**Students are given an entry slip to complete upon arriving to class that is used to gauge their understanding of how supply and demand trends have impacted one area of their lives during the COVID-19 pandemic.