**Generative AI in Teaching, Learning, and Assessment: A Quick Guide**

**Teaching with GenAI**

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| **Application** | **Example Uses** |
| **Content Creation** | Generate slides, lecture notes, code samples, and quizzes automatically. |
| **Code Demonstration** | Use live AI-powered coding during lectures to explain algorithms and debug code. |
| **Adaptive Teaching** | Offer customized explanations depending on the learner’s knowledge level. |
| **Flipped Classrooms** | Prepare AI-generated pre-class resources and exercises. |

**Supporting Student Learning**

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| **Application** | **Example Uses** |
| **Personal Tutors** | On-demand AI chatbots for real-time help with programming and theory questions. |
| **Code Practice** | Automated problem sets, instant code review, and debugging support. |
| **Multilingual Support** | Simplified explanations and translations to assist diverse student cohorts. |
| **Study Planning** | Personalized learning paths, resource recommendations, and progress tracking. |

**Assessment with GenAI**

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| **Application** | **Example Uses** |
| **Auto-Grading** | Automatically assess code correctness, style, and efficiency; generate feedback. |
| **Formative Assessment** | Continuous low-stakes quizzes with instant AI-generated feedback. |
| **Authentic Assessment** | Emphasize project-based and problem-solving assessments that go beyond basic coding tasks. |
| **Plagiarism Management** | Utilize AI to detect code similarities and AI-generated submissions. |

**Challenges to Consider**

* **Academic Integrity:** Clear policies on what constitutes acceptable AI use.
* **Accuracy & Bias:** AI may sometimes produce incorrect or biased outputs.
* **Equity:** Ensure equal access to AI tools for all students.