



**NATIONAL INSTITUTE ON ARTIFICIAL INTELLIGENCE  
IN SOCIETY  
CALIFORNIA STATE UNIVERSITY SACRAMENTO**  
<http://csus.edu/ai>

## Course Development with AI

---

### The need

- High DFW rates in bottleneck courses highlight the urgent need for effective instructional design, especially for underrepresented and first-generation students.
- Traditional course design methods often overlook the potential for engaging, student-centered learning experiences.

### What AI-powered chatbots can do

- **Syllabus Feedback:** AI can analyze syllabi and give feedback on engagement and equity, suggesting improvements for learning outcomes, content, pacing, and assessments.
- **Activity and Assessment Design:** AI can generate class activities, assignments, and formative assessments, promoting interactive learning.
- **Test Creation and Analysis:** AI assists in crafting tests with credible distractors and analyzing test psychometric properties for enhanced assessment quality.
- **Rubric Development:** AI can help develop detailed evaluation rubrics, offering feedback on various performance indicators across beginner to outstanding levels.

### Institutional support

- While individual faculty can independently use AI for course redesign, institutional efforts can significantly enhance the effectiveness of such initiatives.
- Institutions should foster a coordinated approach, involving instructional designers and incentivizing the redesign of courses with high DFW rates.

### Why does it work?

- Pedagogy is where the wisdom of the crowd often work. No one person can know all possible student activities, assignments, or learning materials. AI gives access to the collective wisdom of each academic discipline.