



Putting it Into Action: Flexible Course Delivery

Subject Number: **8.S05**
Instructor: Barton Zwiebach
Course Name: Quantum
Mechanics

Overview

MOOCs offer foundational material for infrequently offered courses, facilitating alternative deliveries & more opportunities for students to take the class.

Educational Challenges

MIT course 8.05 consumes a great amount of resources, especially faculty time and energy. Because of this, it is traditionally offered only once a year.

Problem: Students would like to take the course more often.

Solution: Zwiebach used his MOOC 8.05x as source content for his residential MIT course 8.S05, and supplemented the material on the MOOC with mandatory twice-weekly recitations for the MIT students. This took considerably less effort for Zwiebach, and allowed him to offer the 8.S05 version of his course on the 'off' semester. There was overwhelming positive response:

- Students loved the online homework and immediate feedback.
- Students liked the online videos, which allowed for flexible watching time and the ability to re-wind and speed up. It required self-discipline, but these were primarily upperclassmen.
- When a colleague will teach the course next year, s/he can use or re-purpose the materials, problem-sets, videos, etc.

Key Take-Aways

MOOCs are a useful resource in face-to-face classes for:

- Providing flexibility in course delivery.
- Housing a repository of materials that can be re-used in subsequent iterations of the course.



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