

Integrating Biofuels Education into Chemical Engineering Curriculum

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Why?

- What problem are you solving?
 - Gap between advanced biofuel research and undergraduate biofuel education
- What are your educational objectives?
 - create and deploy modular educational materials to integrate biofuels technology into undergraduate chemical engineering curriculum



When?

- What is the developmental history of your innovation?
 - 2012-2014: module development
 - 2014-present: module improvement and utilization in classes



Where?

- Have you tried this in other institutions?
 - Initiated at Tuskegee, expanding to Auburn.
- Is this developed for a single class, a full course, or a curriculum?
 - Developed for two classes, can be extended to entire curriculum.



What?

- What learning activities and materials have you developed?
 - <http://biofuelsacademy.org/>
 - 21 Classroom modules developed
 - About 100 Web modules/pages developed
- What is your theory of change?
 - piecemeal or “spread-out” will result in better students learning outcome than “single-course”.
- What has worked really well?
 - On line material, on-line videos viewed > 90,000 times
 - Easy integration into courses



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Prognosis?

- How are you documenting impact?
 - Surveys and assessments
- How do you plan to scale-up?
 - NSF IUSE proposal underdevelopment
- What challenges are you currently facing?
 - Evaluation & dissemination
- What advice would you like from others at FOEE?



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– Evaluation, dissemination, institutionalization...

