Course Design and Curriculum Reform

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EXHIBITS

EXHIBIT 1: Design Document – Description of Elements

Big Ideas	Enduring Under-standings	Learning Outcomes	Common Misconceptions & Barriers	Essential Questions	Guiding Concepts	Authentic Performance Tasks	Performance Criteria	Required Competencies
Big Ideas are the glue that holds a field together, the truly important meta-concepts and theories that function as "conceptual lenses" for whole knowledge domains. In the natural sciences, the Scientific Method is one such Big Idea that actually cuts across more than one discipline. Make sure to focus on only a few such ideas (maybe 2-4), because each one will typically generate multiple Enduring Understandings, which in turn can generate multiple Learning Outcomes.	Enduring Understandings are more specific derivations from these Big Ideas: key elements of their definitions, applications, or implications. They are generalizations that are central to a discipline and transferable to new situations. They are what students should understand and be able to use several years after the class is over.	Learning Outcomes address some key aspects of the Enduring Understandings. They need to incorporate the following characteristics: 1. What will the student be able to do by the end of the course? 2. How will this foster the students' higher order thinking skills? 3. How can these learning outcomes be measured? 4. How concrete does it need to be in order to be measurable? What action verbs might make it sufficiently concrete?	After years of experiences with specific student populations, faculty have developed a sense for what may cause the biggest problems to students' conceptual understanding. Some barriers come from inadequate reasoning capabilities; others come from (bad) intellectual habits that get in the way of perseverance, bias awareness, or tolerance of ambiguity. A third category are systematic misconceptions students bring to a discipline (e.g. overly simplistic models or stereotypes).	Good Essential Questions are the scaffold of the course. They cause relevant inquiry into the Big Ideas and core content. They stimulate ongoing rethinking of prior lessons. When it comes to building a syllabus with a sequence of weekly activities, Essential Questions are key to determining the logic of the course flow. An effective course is built as a continuum of questions that help learners unpack the meaning of the course content for themselves.	Guiding Concepts are the link between the course content and the Enduring Understandings (more so than the Learning Outcomes and Big Ideas). They are not just topics or facts. Topics and facts are course specific; concepts cut across course segments, whole courses, even disciplines. Facts are the building blocks for knowledge; concepts are the building blocks for understanding.	In-depth understanding is hard to assess with multiple-choice or even essay tests. True understanding is best revealed by students performing a realistic task from the discipline. For a task to be realistic (authentic), it should fulfill the following criteria: 1. Be realistically contextualized; 2. Require judgment and innovation; 3. Ask the student to "do" the subject; 4. Replicate challenging situations from the profession; 5. Assess the student's ability to use a repertoire of knowledge and skill.	Authentic performance tasks are based on or similar to real-live problems that practitioners in the field might encounter. The criteria for judging students' performance at the tasks will therefore be related to broad domains like: 1. Cognitive skills (critical & creative thinking, and problem solving, 2. Aesthetic appreciation, 3. Social interaction, and 4. Oral and written communication.	The authentic performance task is a guide post for determining what competencies students need to complete such a task. Complex performances require a host of sometimes hidden competencies that need to be identified and taught. Effective instructors break down complex tasks into specific modes of thinking and provide opportunities for students to practice these. Scoring rubrics for the perform. task are helpful in pinpointing needed competencies.

EXHIBIT 2: Course Design Document Template

Big Ideas	Enduring Understandings	Learning Outcomes	Learning Barriers & Misconceptions	Essential Questions	Guiding Concepts	Authentic Performance Task	Performance Criteria	Required Competencies
A.	A.1.	A.1.a.						
	A.2.	A.2.a.						
B.	B.1.	B.1.a.						
	B.2.	B.2.a.						
C.	C.1.	C.1.a.						
	C.2.	C.2.a.						
		C.2.b.						

EXHIBIT 3: Design Document for Psychology 109, The Pursuit of Happiness

Big Ideas	Enduring Understandings	Learning Outcomes	Learning Barriers & Misconceptions	Essential Questions	Guiding Concepts	Authentic Performance Task	Performance Criteria	Required Competencies
Learning Skills	Effective learning requires cognitive, attitudinal, & organizational skills	Assess own strengths & weaknesses in those skills	-Unrealistic self-concept -Instructor should tell me what to do	-How can you improve on the skills at which you are weak? -What are the responsibilities of student v. instructor?	-Multiple intelligen. -Active learning -Learning styles -Metacognition -Self-esteem -Habits of mind	Reflective journaling about their own learning skills and behaviors	-Describes own current practices in target skill -Describes insights gained about new strategies -Explains what may not work for self	-Close reading that extracts main ideas from text -Visualize how learn. strategies will work -Willingness to question own strategies -Ability to set realistic targets for change
	Learning skills are acquired through a cycle of practice, feedback, & reflection	Develop routines for acad. reading, note-taking, test preparation, etc.	-Lack of time management -Doing homework is optional -Reflection seen as mere opinion	-How to increase time-on-task? -What's the purpose of reflection?	-Time managemnt -Learng strategies -Commitment to change -Reflection -Learned Helplessness			
Teamwork	We need to learn to collaborate if we want to solve our problems	Recognize benefits and pitfalls of group decision making	-One learns nothing in groups b/c students lack expertise	-When do groups perform better than individuals?	-Intrinsic v. extrinsic motivation -Social loafing	Experience the effectiveness of collaborative test-taking, & give per-formance feedback to group members	-Distinguishes dimensions of: attitude, listening skills, cooperative-ness, and preparedness	-Active listening -Aware of non-verbal behavior -Courage to critique others
		Acquire basic skills for effective communication in teams	-Critiquing others is rude	-How to give and receive constructive feedback?	-Assertiveness -Conflict resolution -Cultural difference			
Creativity	Greater creativity breeds greater happiness	Cultivate a curiosity for new experiences and skills	-People are born creative or not -If it requires hard work, it can't be creative	-Does happiness exist without creativity? -Can you learn to be (more) creative?	-"Flow" -Intrinsic reward -Optimal challenge -Energy -Curiosity -Openness to experience -Maslow's hierarchy of needs	Doing a creative audio-visual presentation on their personal "happy place" in Chicago	-Detects concepts in real situation -Looks at things with new eyes -Understands connected concepts -Seeks out new experiences	-Defines a location -Identifies personal priorities -Describes feelings -Identifies needs -Observes inter-actions -Interviews others -Creates PPT pres.
Happiness	Happiness is a journey, not a destination	Recognize the joy of the *process* of their personal development, not just the end results	-Society rewards results, not process -Happiness is sth. that happens to you	-What's the purpose of psychology? -Are human characteri-stics ever permanent?	-Positive psychol. -Attachment -Personality traits -Happiness archetypes	Planning what lifestyle choices they might make to lead a happy life in the future	-Assesses own strengths, skills, interests, needs, desires -Summarizes previous course reflections -Integrates these to design plan for own future	-Make sense of psych. inventories -Accept (for now) personal limitations -Synthesize info from diff. sources -Translate conclusions into a view of own future
		Become aware of the importance of place as it relates to being happy	Happiness is a state of mind unrelated to physical environments	-What are the preconditions for people to be happy? -Contributions of other disciplines?	-Sense of purpose -Intrinsic meaning -Pleasure -Peak performance -Social relationships			

EXHIBIT 4: Program Goals, etc. in the FYE Program

Program Goal 1: Self-Discovery		
Competency Areas	**Big Ideas**	**Enduring Understandings**
C.A.1: Goal Exploration		
	B.I. 1: Career Exploration	
		E.U. 1: A career/major should fit your intrinsic interests, your personality, and your strengths
C.A. 2: Learning Skills		
	B.I. 2: Reflective Writing	
		E.U. 2: Reflective writing connects class readings with real-world applications and personal experiences
	B.I. 3: Metacognition	
		E.U. 3: Learning improves by exploring one's own intellectual strengths and weaknesses
C.A. 3: Fit w/ Academia		
	B.I. 4: Time Management	
		E.U. 4: Effective learners prioritize their work and spread out tasks over time leading up to due-dates
Program Goal 2: Academic Orientation		
C.A. 1: Inquiry Learning	B.I. 1: Inquiry Process	E.U. 1: Learning is the effort of uncovering what is not obvious and frequently contradicts current beliefs
C.A. 2: The Academic Discipline	B.I. 2: Research Methods	E.U. 2: Different disciplines generate knowledge by using research methods (relatively) unique to them
	B.I. 3: Controversies	E.U. 3:
	B.I. 4:	E.U. 4:
C.A. 3: Interdisciplinary Interests	B.I. 5: Interdisciplinary Research	E.U. 5: Combining the research capabilities of two or more disciplines opens up new perspectives and insights
	B.I. 6:	E.U. 6:

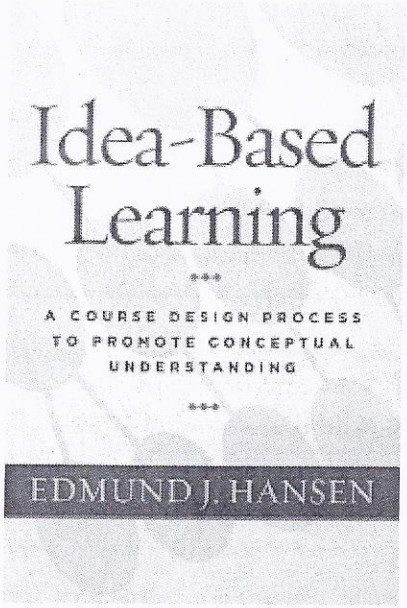
EXHIBIT 5: Curriculum Mapping for FYE Program

		Program Goal 1: " Self-Discovery"			Program Goal 2: "Academic Orientation"		
		Competency Area1: "Goal Exploration"	Competency Area2: "Learning Skills"	Competency Area 3: "Fit with Academia"	Competency Area 1: "Inquiry Learning"	Competency Area 2: "The Acad. Discipline"	Competency Area 3: "Interdisc. Interests"
COURSE A: Pursuit of Happiness	Emphasis on C.A.:	Low emphasis	**High emphasis**	Low emphasis	**High emphasis**	Medium emphasis	Medium emphasis
	Big Idea	Career Exploration	Metacognition	Teamwork	Inquiry Process	Research Methods	Interdisc. Research
	End. Undst.	Intrinsic interests…	Own strengths…	Come prepared…	Uncover non-obvious...	Unique res. methods…	New perspectives…
	Performance Task	Career counseling exercise	Written reflections on study skills	Group quizzes with peer-assessment	Field experience w/ AV-presentation	Written reflections on class readings	Written synthesis of readings w/ own life
	Rubric	--none--	Annotated sample reflections	Peer Evaluation Rubric	Job-aid with suggested questions	Annotated sample reflections	Job-aid with suggested questions
	Learning Barriers	e.g. unrealistic self-concept	e.g. reflection seen as mere opinion	e.g. doing homework is optional	e.g. people are born creative or not	e.g. instructor: tell me what to do!	e.g. ignoring the context of an issue
COURSE B:	Emphasis	Medium	Medium	Low	Low	**High**	**High**
	Big Idea	Major Exploration	Reflective Writing	Time Management			
	End. Undst.	Acad. advis. exerc.	Connect w/ experi.	Prioritize…			
	Perf. Task	Job shadowing	Written reflections on readings	Keep a calendar		Reading log	Synthes. of read. log
	Rubric	Perfor. review chart	Annotated sample reflections	Template of activity types		--none--	--none--
	L. Barriers	e.g. unrealistic self-concept	e.g. reflection seen as mere opinion	e.g. instructor does the reminding			
COURSE C:	Emphasis	Low	**High**	**High**	**High**	Medium	Low
	Big Idea						
	End. Undst.						
	Perf. Task		Refl. on Study Skills	Group project			
	Rubric		--none--	Peer Eval. Rubric			
	L. Barriers						
COURSE D:	Emphasis	**High**	Low	Medium	Medium	Low	Low
etc.							

Idea-Based Learning

A Course Design Process to Promote Conceptual Understanding

Edmund J. Hansen



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Synthesizing the best current thinking about learning, course design, and promoting student achievement, this is a guide to developing college instruction that has clear purpose, is well integrated into the curriculum, and improves student learning in predictable and measurable ways.

The process involves developing a transparent course blueprint, focused on a limited number of key concepts and ideas, related tasks, and corresponding performance criteria; as well as on frequent practice opportunities, and early identification of potential learning barriers.

Idea-based Learning takes as its point of departure the big conceptual ideas of a discipline that give structure and unity to a course and even to the curriculum, as opposed to a focus on content that can lead to teaching sequences of loosely-related topics; and aligns with notions of student-centered and outcomes-based learning environments.

Adopting a backwards design model, it begins with three parallel processes: first, identifying the material that is crucial for conceptual understanding; second, articulating a clear rationale for how to choose learning outcomes based on student needs and intellectual readiness; and finally, aligning the learning outcomes with the instructional requirements of the authentic performance tasks.

The resulting syllabi ensure cohesion between sections of the same course as well as between courses within a whole curriculum, assuring the progressive development of students' skills and knowledge.

Key elements of IBL include:
* Helping students see the big picture
* Building courses around one or more authentic performance tasks that illuminate the core concepts of the discipline
* Clearly identifying performance criteria for all tasks
* Incorporating practice in the competencies that are deemed important for students' success
* By placing the onus of learning on the student, liberating faculty to take on the role of learning coaches
* Designing tasks that help students unlearn simplistic ideas and replace them with improved understandings

Edmund Hansen expertly guides the reader through the steps of the process, providing examples along the way, and concluding with a sample course design document and syllabus that illustrate the principles he propounds.

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