Designing, or redesigning a course is a labor of love. The following five fabulous tips are intended to support you in defining, communicating, and achieving desired student outcomes.

1. Take 3 Steps Backwards

Wiggins & McTighe suggest using a "backwards approach" to designing a course. The idea is to begin with the end in mind (Step 1). What should students know and/or be able to do? This is considered the learning objective. Then, design assessments that most effectively allow students to demonstrate their progress towards achieving the objective (Step 2). And finally, create learning opportunities such as content, materials, activities, and assignments that will support students in achieving the desired outcome (Step 3).

Resources

- Grant Wiggins - Understanding by Design
- UbD Template
- 20-Minute Mentor - How Can Educational Programs Use Backwards Design to Drive Learning and Student Success?

2. Be a SMARTE Pants

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Creating SMARTE Learning Objectives

- **SPECIFIC**
  - Define learning and/or instructional objectives that are clear, detailed, and succinct.

- **MEASURABLE**
  - Specify the targeted student behaviors or products that will be used to assess student achievement.

- **ATTAINABLE**
  - Ensure the objective is achievable (i.e., students have the knowledge, skills, or abilities to achieve the objective).

- **RELEVANT**
  - Reflect learner interests, background, knowledge, and life circumstances.

- **ENRICHED & TRANSFERABLE**
  - Establish a connection between the new learning and its significance to learners' lives and experiences.

- **EQUITABLE**
  - Ensure that all learners have access to learning opportunities and are supported in achieving learning goals.

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Creating SMARTE Learning Objectives
Because brains are goal-driven, essential to learning experiences are goals that make explicit what the learning target is, the path for meeting it, and ways to measure its achievement. Research shows that clarity for teachers about what they want their students to learn is one of the most significant factors related to student success. For students, research has shown that a clear objective drives the nervous system to direct energy purposefully, to build relevance, perceive information, and act strategically. SMARTe is an acronym that can assist you when writing learning objectives that support your teaching and your students’ learning success.

**Student Centered & Specific**: Neuroscience studies confirm that students’ motivation, focus, and persistence are all positively affected when learning objectives are clearly communicated. To be **Student-centered and Specific**, learning objectives should state exactly what is to be accomplished by the students with emphasis on their role (rather than on the teacher’s role). The specificity of the objective should be focused, narrow, and targeted while remaining on what the students will know and be able to do.

**Measurable**: When students are aware of the criteria by which their attainment of the learning objective will be assessed, they show better long-term academic development in comparison to those focused on a final grade or on outperforming others. To be **Measurable**, learning objectives should communicate the expected quality of work or basis for evaluation and grading. To ensure clarity and that the learning objective can be measured include the intended cognitive process (types of thinking) and knowledge dimension (types of knowledge, behaviors or skills).

**Attainable, Aligned & Authentic**: Students need to believe they have the capacity to succeed. Students who experience multiple failures may fall victim to a fixed mindset concluding that they will never be good at something and therefore less inclined to try. To prime the brain to invest in learning, the objectives must be viewed as doable and worthwhile. To be **Attainable, Aligned, and Authentic**, learning objectives should consider students’ developmental levels and the use of scaffolds to support learning that is directly tied to learning activities and assessments that use meaningful “real-world” applications.

**Relevant**: Brains are goal driven but only when the learning objectives are viewed as personally relevant and valuable. Students’ interest and motivation suffer if they do not see utility in what they are being asked to learn. To be **Relevant**, consider learning objectives that help students make personal connections to the content. “Hook” your learners by selling the curriculum components that speak to their interests, background knowledge, and future personal and/or professional self.

**Timely & Transferable**: Students are more likely to persist through challenging tasks when they believe they are making progress towards the objective. Yet, young adults do not easily recognize the correlation between their effort and goal attainment due to their under-developed prefrontal cortex. To be **Timely and Transferable**, it is essential to clearly articulate the learning objectives before, during, and after learning occurs to assist in the creation of learning goals, benchmarks for identifying progress, and a specific ending point for assessment. Learning objectives should strive for deep learning that equips students to know when and how to apply the knowledge and skills in new situations – beyond the context in which it was learned.

**Equitable**: It is important to design a course that relates to, represents, and honors the diversity of those you teach as well as of those who have not been part of “traditional” course materials. The purpose is to be mindful of those who may need additional support and to interrupt patterns of inequity by developing curriculum that is inclusive of and accessible to everyone. To be **Equitable**, 
learning objectives should address the needs of students who are not succeeding, whose needs are not being met, and/or who have traditionally been outside the sphere of success by thinking about multiple means of representation, expression, and engagement.

**Resources**


### 3. Design for Accessibility

Universal Design for Learning (UDL) are course design principles that consider student variability based on abilities, preferences, and prior education. Culturally Responsive Teaching (CRT) considers student variability based on cultural backgrounds. The shared tenant is that recognition and amplification of student diversity is essential to learning and therefore requires purposeful planning. The following principles are grounded in neuroscience and identify three broad networks for learning and remembering information. By intentionally applying CRT pedagogy while fostering these networks designers can increase accessibility for all.

#### Principle 1. Engagement

The WHY of learning promotes purposeful, motivated, and emotionally charged learners and can be ignited by activating the affective networks of the brain. Provide multiple means of engagement that speak to learner interests and autonomy as well as to their sense of self and belonging. Some ideas include:

- creating a welcoming environment by sending an introductory email prior to the course start – include multiple ways to contact the instructor
- providing entry points into the course and content by asking students to make connections to their past experiences and future goals
- using individual response system such as clickers or response cards
- incorporating individual, partner, small group, and large group activities
- allowing video, audio, or written options for self-reflection
- integrating varying historical and current perspectives and values around topics
- creating workflows illustrating where the class has been, is now, and what is to come
Principle 2. Representation

The WHAT of learning creates resourceful, knowledgeable learners and can be ignited by activating the recognition networks of the brain. Provide multiple means of representation using approaches that meet the educational and cultural experiences students bring. Some Ideas include:

- ensuring accessibility and varied modalities of course content and materials – use accessible documents and websites, captioned videos, text readers, textbooks with e-book options, and/or open educational resources
- including viewpoints and narratives that have not been part of “traditional” course content or materials
- activating background knowledge by including the diverse experiences of learners
- presenting course content using visual, auditory, graphic, and verbal formats
- including scaffolded tools to support varied levels of proficiencies and interests (visual organizers, highlighted text features, varied readings, pre-teach academic vocabulary)
- integrating lab or field work, practicum placements, internships, and/or service-learning

Principle 3. Action & Expression

To promote goal-directed learners it is important to activate the strategic networks of the brain. The HOW of learning can be enriched by providing varied options and multiple opportunities for students to express what they know without barriers. Ideas for providing multiple means of action and expression include:

1. providing detailed descriptions of assignments, models, feedback, rubrics, and supports
2. creating opportunities for students to explore issues from multiple angles and across lines of difference
3. honoring multiple ways to communicate ideas and demonstrate knowledge—oral (presentations, debates), written (essays, responses to class time, brochures, poster presentations, infographics), and/or electronic (student response systems, discussion boards, videos, podcasts)

Resources

4. Teach Transparently

Transparent teaching explicitly communicates how and why students are learning course content. Transparency benefits all students – especially underrepresented and first-generation students in three areas: academic confidence, sense of belonging, and mastery of skills identified as most valued by employers. One way to provide Transparency in Learning and Teaching (TILT) is by sharing a set of high-quality directions by TILTing assignments. When writing and communicating directions for an assignment it is important to consider the following components.

1. **Purpose**: When describing the purpose of the assignment, you should specify the skill(s) and knowledge students will gain (and practice) in relation to the course, major, discipline, and/or learning objectives of OSU. The purpose should also include the relevance. It should describe how the assignment is or will be useful to students’ lives during and/or beyond the course, major, discipline, and/or learning objectives of OSU.

2. **Task**: The description of the assignment should support students in efficiently and thoroughly completing the task by identifying each necessary step of the process.

3. **Criteria**: Providing students criteria for completing the assignment provides them an opportunity to reflect on if they are completing the task completely, efficiently, and effectively. It communicates what you are looking for in terms of your expectations. Criteria for completing the assignment could take the form of a checklist, rubric, and/or annotated examples that identify exactly where and how the criteria is exemplified. The criteria should specify characteristics of high-quality work as well as provide an appropriate amount of guiding information to support students at this phase in their learning.

Borrowed from Small Teaching Changes, Big Learning Benefits Mary-Ann Winkelmes, ACU&E

Resources

5. +1

Course (re)design takes considerable time and attention. To alleviate any potential stress-induced paralysis, consider using the “Plus One Approach” to make the integration of new design ideas inspiring and manageable. The Plus One Approach is targeted, responsive, flexible, and timely. It prompts you to anticipate student challenges and respond to student feedback but with boundaries. It does not require a ton of time up front but reduces time spent answering questions and it reduces student confusion increasing their overall persistence, retention, and satisfaction. It is recommended you begin the Plus One Approach by identifying “pinch points” where students might (or tend to) face challenges in your course. To identify the pinch points, consider the following questions. 1) Where and when do students always ask a lot of questions? 2) Which test and/or quiz questions do students frequently answer incorrectly? 3) What content is frequently being retaught or explained in different ways? Then, experiment with small incremental changes such as: revise Learning Objectives so that they are SMARTE; provide students with an alternative resource for learning (such as a podcast); TILT an assignment; or introduce additional, opposing, historical, or seldomly heard perspectives. The goal is to target and break up your design efforts into manageable chunks to strategically support student success in the places where you are most likely to have the greatest impact.

Resources