**INTRODUCTION**

Welcome to Universal Design for Learning! In this workshop you'll learn about the basic principles of Universal Design for Learning (UDL) and why UDL is a best practice at post-secondary institutions across the nation--in fact, you may already be teaching with it!

**PARTNERS**

The content of this program is adapted from the UDL training program organized by Sonoma State University. Coordinated by the Center for Teaching and Faculty Development (CTFD), this presentation is offered through Ensuring Access through Collaboration and Technology (EnACT), a project funded by the U.S. Department of Education and in which SF State is a partner.

**MODULE GOALS**

Our program goals are simple:

First, you’ll be introduced to the foundation of Universal Design for Learning. Consider this a primer of what UDL is all about.

Next, we want to help you understand the principles of UDL and the benefits it offers.

And finally, we discuss why you should incorporate UDL into your teaching and curriculum design.
SECTION 1: THE FOUNDATION OF UNIVERSAL DESIGN FOR LEARNING

REACTIVE DRAWBACKS

Universal Design is an architectural term that was originally coined in the 1970s by Ron Mace from North Carolina State University. It is the proactive design of products and physical environments to make them usable by all people to the greatest extent possible --- without the need for adaptation or specialized design. Within the field of architecture, the retrofitting of buildings with ramps or lifts in order to increase accessibility was often the primary --- and sometimes only --- modification made for broadening access.

However, “after the fact” or reactive modifications, like the ramp against the brick building in the photo to the right, are not ideal solutions. In fact, retrofitting typically solves only one access issue: ramps ensure people can get to and from the building, but don’t address how they will access features within the building itself. Reactive modifications can also be costly and mar the aesthetics of a structure.

UNIVERSAL DESIGN SOLUTION

With Universal Design, Ron Mace offered a new premise: perhaps we should teach architects to design buildings from the start that would work for everyone. We could adopt a proactive, intentional approach to design, one that anticipates a variety of physical or sensory needs, broadens usability to the public, is more economical, and finally one that respects human diversity by not asking someone to come in through a different door.

UNIVERSAL DESIGN... FOR LEARNING

Universal Design for Learning extends this concept into the classroom and educational curriculum. It’s the best practice process of making our course concepts accessible and skills attainable regardless of learning style, physical, or sensory abilities. It’s asking ourselves whether our pedagogical environment is accessible to everyone.

UDL FOUNDATIONS: BEST PRACTICES

Universal Design for Learning is also based on guidelines for effective instruction ... the best practices of higher education. These include three principles of good teaching: faculty want to reach and teach all students as effectively as possible; a proactive course design for a diverse student body is preferable to making exceptions on a case-by-case basis; and faculty want students to learn and interpret the course content in a meaningful way.
BRAIN-BASED LEARNING NETWORKS

Universal Design for Learning also emerged from a greater understanding of how our brains receive, store, process, organize and retrieve information. The neuroscience of learning suggests that there are three interrelated learning networks and that each involves region of the brain located in both the cerebrum and mid-brain.

**Recognition Learning Networks:** refers to the ways we receive information, and identify and interpret patterns of light, sound, smell, touch, and taste. The information gathering in this process tells us *what* we are learning.

**Affective Learning Networks:** refers to the ways we respond to the information emotionally which impacts our motivation to learn and the intensity with which we engage in learning activities. To motivate students, instructors ensure that the students understand *why* they study.

**Strategic Learning Networks:** refers to how we demonstrate learning, how we organize information, how we plan our investigation, and how we execute, monitor, and assess our knowledge and skills.

INDIVIDUAL LEARNING DIFFERENCES

These networks demonstrate how learning is a different process and experience for every individual. Each student in your class will demonstrate a different pattern, a different synthesis of each network. As David Rose, the founder of CAST (The Center for Applied Special Technology) and a leading proponent of UDL has stated, “For me the most important thing is that there isn't one regular student. There's no sort of simple nervous system that's the right one. Students with disabilities tend to fall further away from the mean, but they're on a regular continuum, they're all part of students who have widely differing ways in which they can recognize information, ways in which they can organize their own expression of that information, and ways in which they're engaged, the ways in which their affective difference emerge. Those individual differences are the kind that we need to pay attention to, to identify both the strengths and weaknesses of each student.”

“Applying universal design to learning means that we’re moving beyond making sure that the classroom is accessible. But Universal Design for Learning is about making sure that there are alternatives, that there are ways in which every student in the class can learn. So Universal Design for Learning is making sure everyone can get in the curriculum and in particular making sure everybody can get to the learning. The key thing in Universal Design for Learning or in curriculum materials that are universally designed is to build flexibility into the materials themselves so that a teacher or a student can do that individualizing that we need.”
SECTION 2: THE PRINCIPLES OF UNIVERSAL DESIGN FOR LEARNING

UDL: THREE KEY PRINCIPLES

Universal Design for Learning is based on three key principles of instruction.

First, diverse methods of course delivery, multiple REPRESENTATIONS of concepts reduce or eliminate barriers to the learning process, and support the recognition learning network identified in brain research.

Second, multiple student ENGAGEMENT techniques emphasize the affective learning network, and make students willing, active participants in the learning process.

Finally, strategic learning networks are strengthened by offering alternative means of student EXPRESSION, so that students have a choice of formats to demonstrate what they have learned.

Of course, all of these pedagogical tactics are really best practices in teaching ... and you may be implementing them already!

UDL: IMPORTANT TO ALL STUDENTS

Like other best practices in teaching, UDL precepts enhance student learning, and students realize this. The EnACT conducted a survey asking students with and without disabilities to respond to how important representation, engagement and expression are in a college classroom. Both groups uniformly cited the high importance of key UDL principles in their educational experience.

<table>
<thead>
<tr>
<th>Representation</th>
<th>Students Without Disabilities</th>
<th>Students With Disabilities</th>
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<tbody>
<tr>
<td>“I provide examples/illustrations of all major course assignments or activities.”</td>
<td>82%</td>
<td>94%</td>
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<table>
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<tr>
<th>Engagement</th>
<th>Students Without Disabilities</th>
<th>Students With Disabilities</th>
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<tr>
<td>“I offer varied instructional methods to involve students in the learning process.”</td>
<td>61%</td>
<td>77%</td>
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<th>Expression</th>
<th>Students Without Disabilities</th>
<th>Students With Disabilities</th>
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<tbody>
<tr>
<td>“I provide clear guidelines and rubrics for all major course assignments”</td>
<td>83%</td>
<td>85%</td>
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WHAT IS REPRESENTATION?

So what do we mean by representation? Basically, the term refers to how you design and deliver information to your class—how you impart essential course content to your students.

UDL emphasizes that students access information in a variety of formats—auditory, visual and kinesthetic. Providing multiple formats for your course material increases information access and improves the chances for successful student learning.

Arlene Rodriguez, from Springfield Technical Community College, uses UDL techniques in her literature classes. In this video example, she shares how UDL and offering multiple methods of representation has enhanced her classes and teaching.

A transcript of this UDL video from the original presentation is available online at the Center’s web site. Click to view the video transcript document for the UDL video featuring Arlene Rodriguez.

WHAT IS ENGAGEMENT?

The second principle of UDL is engagement. Engagement refers to how and by what means students participate in your class.

Since enriched, active participation stimulates and enhances the learning process—and different students are engaged by different approaches—UDL suggests that we adopt diverse methods of engagement to better reach all students.

In this video example, Dawn Tamarkin, Biology teacher at Springfield Technical Community College, discusses how UDL helped her forge an innovative and successful approach to student engagement.

A transcript of this UDL video from the original presentation is available online at the Center’s web site. Click to view the video transcript document for the UDL video featuring Dawn Tamarkin.

WHAT IS EXPRESSION?

The final principle of UDL is expression. Just as learning preferences are diverse, so, too, are the ways in which students demonstrate what they’ve learned.
UDL follows best teaching practices by acknowledging this. Giving students multiple ways to show their mastery of a subject not only increases the chances of active learning and retention, but provides a more accurate assessment of their performance and your teaching success.

Neil Lindeman, professor of Technical and Professional Writing, uses a UDL strategy by soliciting creative and original work from students and directing them to share and critique their own work. This technique allows students to graphically demonstrate what they have learned, and to receive immediate input about the quality of their ideas.

A transcript of this UDL video from the original presentation is available online at the Center’s web site. Click to view the video transcript document for the UDL video featuring Neil Lindeman.

UDL CAN HELP YOU...

Meet the needs of diverse learners
Reduce need for individual accommodations
Remove barriers from the learning process
Allow students alternative ways to access and engage in learning
Offer flexibility in course delivery

The principles of UDL are also the basics of effective teaching. You may be implementing some of them already! By continuing to think about a UDL approach to your course or parts of your course, you will meet the needs of diverse learners and remove barriers from the learning process, as well as find flexible, alternative and pedagogically satisfying ways for your students to engage in active learning. Ultimately, by focusing on UDL as part of teaching and course development, you will also significantly reduce the need for individual accommodations in the classroom.
NO MAGIC FORMULA

By now, you realize that UDL is the antithesis of focusing on specialized accommodations. It is not providing special accommodations for a select few... instead, it is predicated on the idea of obviating the need for individual accommodation, because consideration of different student needs is built in from the start.

And of course, UDL doesn’t make courses “easier”--it makes courses more effective at teaching and learning.

Still, as a pedagogical best practice, UDL can’t solve every curricular or instructional issue. There’s no magic UDL formula to follow. UDL, like any best practice in teaching, depends on what you make of it.

UDL BENEFITS FOR STUDENTS

UDL is also a student-centered teaching practice that asks you to consider the diversity of your classroom. By removing the barriers to the learning process, students will enjoy greater access to your course material, and be better able to demonstrate their learning achievements through multiple means of expression. This tandem of more accessible learning and more flexible demonstration of course mastery--coupled with active student participation in their own education--creates a much stronger sense of student satisfaction and a more meaningful learning experience.

UDL BENEFITS FOR FACULTY

Faculty are equal benefactors with UDL implementation. UDL not only gives you the help you need in trying to reach a diverse student population, but it also gives you structured tools for pedagogical analysis, opportunities for critical evaluation of your instruction, and, because of its demonstrable success in helping you help students learn better, stronger career satisfaction. UDL is a best practice for everyone in the educational relationship.
Universal Design for Learning is rapidly becoming the future of education at post-secondary institutions. The principles of UDL not only address issues of social justice and equity, but also express the fundamentals of best teaching practices. Designing a course to make it accessible to the greatest possible number of learners is far more cost-effective than case-by-case accommodation. And implementing UDL allows you to think positively and creatively about your teaching and learning in a way that will enhance your curriculum and instruction.

SECTION 3: TEACHING WITH UNIVERSAL DESIGN FOR LEARNING

REFLECTIVE TEACHING

There may be many UDL practices that you’re already employing for your classes. Essentially, embracing UDL as a best teaching practice begins with reflections ... reflections individually or within a faculty learning community, on what you teach, how you teach, and whom you are teaching.

You can start with making sure you identify the course concepts that are most critical ... what you want the students to take away from the class. Then focus on your current process. Is it inclusive? Are you reaching as many students as possible? How are you assessing your success as an instructor and the students’ success as learners?

All of these questions are part of your development as faculty, but understanding the UDL principles can help focus your attention on areas that need it.

The second part of the process is to implement changes. Don’t be afraid to experiment ... and don’t be afraid to start with something small.

POINTS TO CONSIDER

EnACT (Ensuring Access through Collaboration and Technology) has devised a checklist to help you see if you are already implementing UDL in the classroom, and help you think about the questions to ask if you are not. These points serve as a framework for UDL planning and delivery. You can access the single sheet of information in this PDF or you can download it from our website at www.sfsu.edu/~ctfd/udl.

ASSESS YOUR COURSE

As we said before, you might already apply some of the UDL principles. Before you proceed, take a moment and consider a course that you teach and to what extent you implement these principles in your own practice. Fill out the “Preliminary Assessment of Faculty Implementation of Universal Design for Learning”. This will help you assess your adoption of Universal Design for Learning both before and after this program.
UDL EXAMPLE: COURSE GUIDELINES AND THE SYLLABUS

Let's use a course syllabus as an example. In implementing UDL, your syllabus should be comprehensive, accessible and easily understood. In an EnACT survey, students with and without disabilities rated an understandable, comprehensive syllabus with clearly defined course requirements, expectations and due dates as crucial to their classroom success. In following UDL guidelines, it’s also important to include information on campus-based student support services, including disability support services, and to offer the students multiple ways of communicating with and contacting you about questions or concerns.

ACCESSIBLE COURSE MATERIALS

Once you make sure your course materials (e.g. syllabus, handouts, presentations, tests, etc.) are accessible, your format must be, too. There are two principle ways to do this: either by converting your course materials, which is the equivalent of retrofitting, and not the ideal solution, or by creating a new document from the ground up, with an inherently sounder structure.

Course material accessibility is dependent upon structure created within the document itself. A properly formatted structure can be built by popular document creation software like Microsoft Word, PowerPoint or Adobe Acrobat, and allows screen-reading software to access the information contained, thus giving a logical reading order to the document.

Once you have created accessible documents, be sure that they are available in multiple file formats.

UDL EXAMPLE: ENGAGEMENT TECHNIQUES

Student participation is always a key to active learning. If your course self-assessment reveals that your class could benefit from increased student engagement, these basic UDL examples may help.

Quick Write is a student engagement strategy that is designed to give students the opportunity to reflect upon their learning. Students are asked to write short, open-ended statements about what they learned, problems they encountered, what they liked (or did not like) about the lesson, and about how well they understood the concepts. By doing this exercise, the students are actively participating in the lesson.

Think/Pair/Share is another technique, in which students are divided into pairs or small groups for discussion, after which they share their ideas with the class.

Guided Notes are a popular way to give students the framework of your content. In a PowerPoint or similar presentation, you can select basic information, the foundations of the lesson, but omit concepts and information that you want to present or share in a lecture or other instructional framework. The notes can supplement your lecture, give students a prelude or serve as a review. They also provide an alternative means of representation under UDL guidelines.

These are only a few examples of many UDL applications.
UDL EXAMPLE: EXPRESSION TECHNIQUES

In addition to active class engagement, students need diverse methods of demonstrating their progress and mastery in the course. UDL offers many suggestions for exploring multiple means of student expression, which in turn will give you a much more accurate assessment of your own classroom. The choices you provide will challenge your students academically, but allow them to better communicate their own degree of success.

For example, experiment with small group-based projects evaluated by peers, or offer choices in the style of work: rather than a final paper or presentation, allow students to submit presentation notes with written references, or give them the choice of either short response papers with fact sheets and references or more traditional short research-based papers.

You’ll find that your students learn best when they feel most comfortable with the method of demonstrating their learning--one of UDL’s guiding principles, as well as a best teaching practice.

UDL GUIDELINES

The Center for Applied Special Technology is a leader in the research and development of UDL course integration. Their guidelines and suggestions can help you discover innovative ways to implement UDL in your courses.

UDL RESOURCES

The Center for Teaching and Faculty Development website maintains an up-to-date list on UDL resources. Visit us to find out more at http://www.sfsu.edu/~ctfd/udl.

THE SESSION IS COMPLETED

Thank you for your interest in Universal Design for Learning. We hope you have engaged this online introduction and will start implementing UDL principles in your courses.

We encourage you to further explore UDL and test your knowledge by participating in a review session.