Universal Design of Instruction:
Effectively Teaching All Students, Including Those with Disabilities

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Sheryl Burgstahler at NDEW 2011/OXIDE
1970 UW student:

“Ramp the curbs. Keep me off the street.”

-the UW Daily
1992 UW student (Karl Booksch)

- **DO-IT started with NSF funding**
- **We had**
  - *curbcuts!* We were serious about physical accessibility.
  - *Disabled Student Services Office*
  - *Awareness & attitudinal barriers persisted*
2011 UW

• Much greater awareness of accommodations requirements
• Promotion of the social model of disability & universal design
• Most disclosed disabilities are “invisible”
Handout

Broadening Participation in Science & Engineering by Welcoming Participants with Disabilities

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Models of Disability

- Deficit/Medical/Rehabilitation/
- Legal
- Social
Approaches to Access

• Accommodations
• Universal Design
Accommodation =

Alternate format, service, &/or adjustment for a specific individual
“Coffeepot for Masochists”, Catalog of Unfindable Objects by Jacques Carelman; in Donald Norman’s *The Psychology of Everyday Things*, 1988

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Universal Design =

“the design of products & environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.”

The Center for Universal Design
www.design.ncsu.edu/cud
How could you universally design a name tag?
We need both:

*Universal design* *(proactive for everyone)*

& *accommodations* *(reactive for individuals)*

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Quiz

A faculty leader along with a total of 9 other instructors & students met to discuss potential curriculum changes to a chemistry course. One participant requested a sign language interpreter. When the invoice arrived…
Who is right about the cost of interpreters?

a. Accountant: “Ouch. $80 for one person? That is expensive!”

b. Faculty leader: “Oh, no, the cost was only $8 per person.”
UD of Instruction:

• embraces the social model of disability
• is a proactive process.
• can be implemented in incremental steps.
• focuses on benefits to all students.
• does not replace good teaching practices or lower academic standards.
• minimizes the need for special accommodations for individuals.

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Apply UDI to:

- Class Climate
- Interaction
- Physical Environments & Products
- Delivery Methods (apply UD to overall choices & to each method)
- Information Resources & Technology
- Feedback
- Assessment
- Accommodation
Examples in a UDI Course

• **Arrange seating** so that everyone has a clear line of sight.

• **Design chemistry labs** with at least one station accessible by wheelchair-users; purchase accessible technology (talking color detection; hands-free stirrers, beaker holders).

• **In labs, make sure a student with a disability plays an active role.**
• Welcome students by name.
• Be approachable & available.
• Avoid stereotyping & stigmatizing a student by drawing undue attention to a difference.
• Model mutual respect.

• Use large, bold fonts on uncluttered overhead displays & speak aloud all content presented.

• Repeat questions students ask.

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• **Face** the class while speaking; consider using a microphone; make eye contact.

• *Provide* multiple ways to gain & demonstrate knowledge, using multiple senses. *Provide* scaffolding tools (e.g., outline).

• **Avoid** unnecessary jargon; **define** terms.

• **Summarize** major points.

• **Provide** multiple, diverse examples.
• Select flexible curriculum.
• Select materials early.
• Provide materials in accessible electronic formats.
• Accommodate a variety of reading levels & language skills.
• Provide regular feedback.
• Provide **corrective opportunities**.
• **Monitor & adjust**.
• **Test in same manner in which you teach**.
• **Minimize time constraints**.
• **Address individual needs in an inclusive manner**.
• **Know how to arrange for accommodations**.
Good teaching is good teaching.
Universal Design is:

- an attitude that values diversity, equity, & inclusion.
- a goal.
- a process.
- practices that make products & environments welcoming, accessible, & usable for everyone.
UD – know it when you see it:

...at “skateboard park”

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