Ohio Career-Technical Competency Assessment System (5-23-14)

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Ohio | Department of Education

THE OHIO STATE UNIVERSITY

CENTER ON EDUCATION AND TRAINING FOR EMPLOYMENT

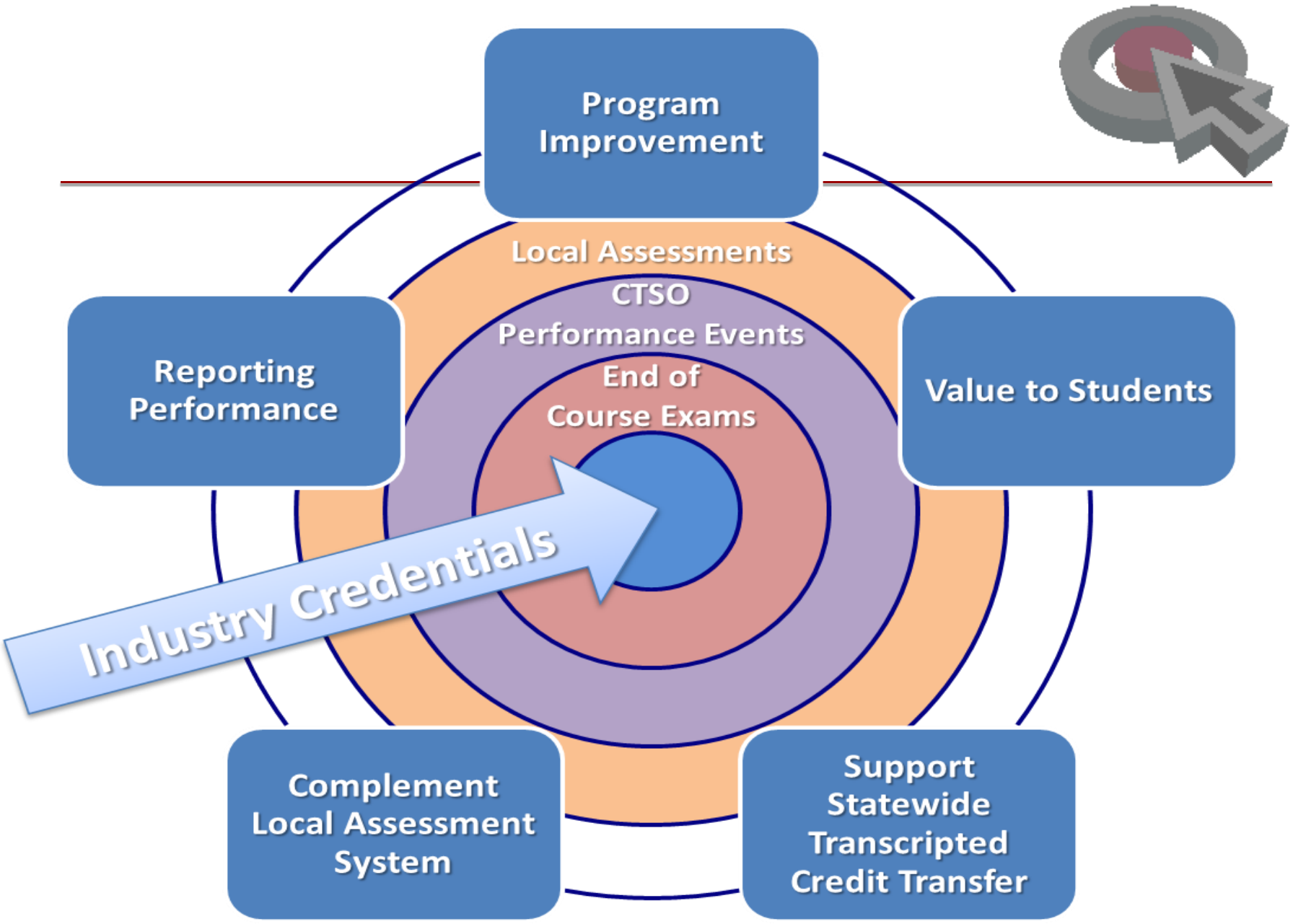
COLLEGE OF EDUCATION AND HUMAN ECOLOGY

AGENDA

- Strategic-Psychometric Updates
  - Pathway Testing: EoC shift, Quality Assurance, Plans
  - Pre-Testing for Courses: Design & Deployment
  - Student Learning Objectives (SLO) and WebXam
- Handoff to IT architect
  - WebXam walkthroughs and demonstrations
- Eval: https://www.surveymonkey.com/s/WebXamMay232014

I. Ohio CTE Testing System

- Testing System Objectives
  - Data for **federal-state performance measures (Technical Skill Attainment = TSA = 2S1 indicator; district report cards)**
  - Data for ODE-CTE and local school districts to use in **program improvement (including planned pre-post testing)**
  - Complement local systems for **assessing student performance**
  - Build secondary-postsecondary relationships to develop statewide-bilateral **transcripted credit transfer from secondary to postsecondary institutions**
  - Provide reports that students **value to communicate** their success


Program Improvement
Local Assessments
CTSO
Performance Events
End of
Course Exams
Reporting Performance
Value to Students
Industry Credentials
Complement Local Assessment System
Support Statewide Transcripted Credit Transfer

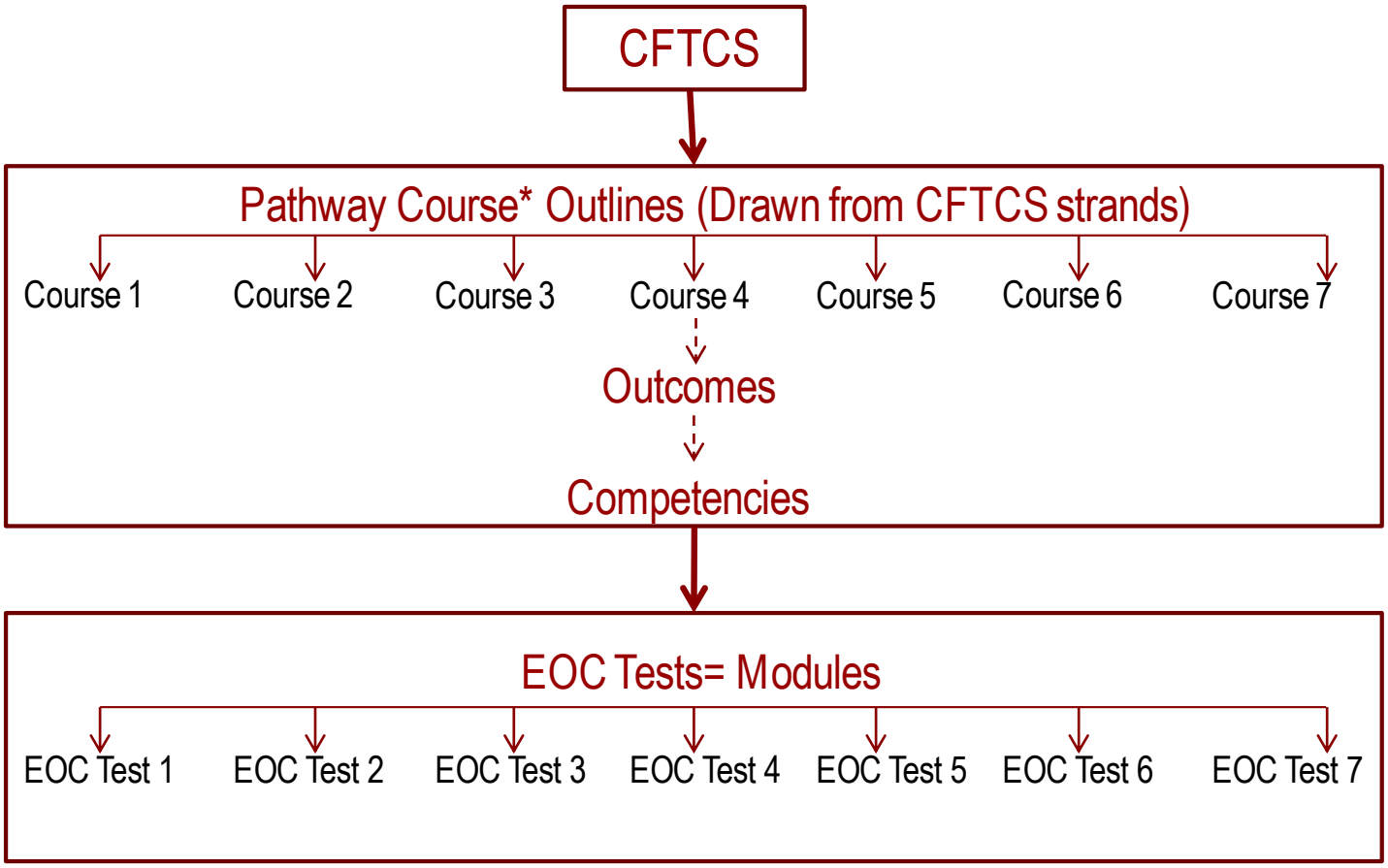
How Do New Tests Differ?

- Replacing occupation-level tests 2009-14 (Phase 1)
- Earlier pathway tests (25-30 items, 6-18 modules)
  - Two levels of challenge for items (Bloom, Webb levels)
    - C1 = ~ 70%; recall (vocab, tools, facts); Webb DoK Level 1
    - C2 = ~ 30%; application, analysis, evaluation; Webb Level 2
    - Scenarios about entry workplace (~30% of items)
- Current course-based system for standards-tests
  - Module = Course; pre-post tests to be offered (40/40 items)

How Do New Tests Differ?

- Shift underway to course-based model: Standards-Tests
  - Major revisions (6 CF in 2012-13 & 5 CF in 2013-14) – wrapping up Cohort #2 (Arts-Comm, Business-Fin-Mktg, Ag) – new levels & layouts
  - CETE wrote items February to May 2013 and through summer, now finishing FY14 schedule & planning ahead for FY15
  - Field testing window closed May 2, getting ready to rescore & post
- Two cutoffs (formerly benchmarks)
  - Proficient is the traditional mastery point
  - Advanced designation recognizes higher performance

Ohio CTE Course Structure



COURSE STRUCTURE: SAMPLE

Career Field	Health Science	Page 1
Course Name	Course # 6 - Principles of Allied Health	
Description	In this first course, students will apply knowledge and clinical skills necessary to assess, plan, provide, and evaluate care to patients in varied health settings. Students will apply first-aid principles and techniques needed for response to choking, cardiopulmonary resuscitation, and other life-threatening emergencies. Emphasis will be placed on regulatory compliance, patient safety, pathophysiology, and medical interventions. Additionally this course introduces psychomotor skills needed to assist individuals in meeting basic human needs.	

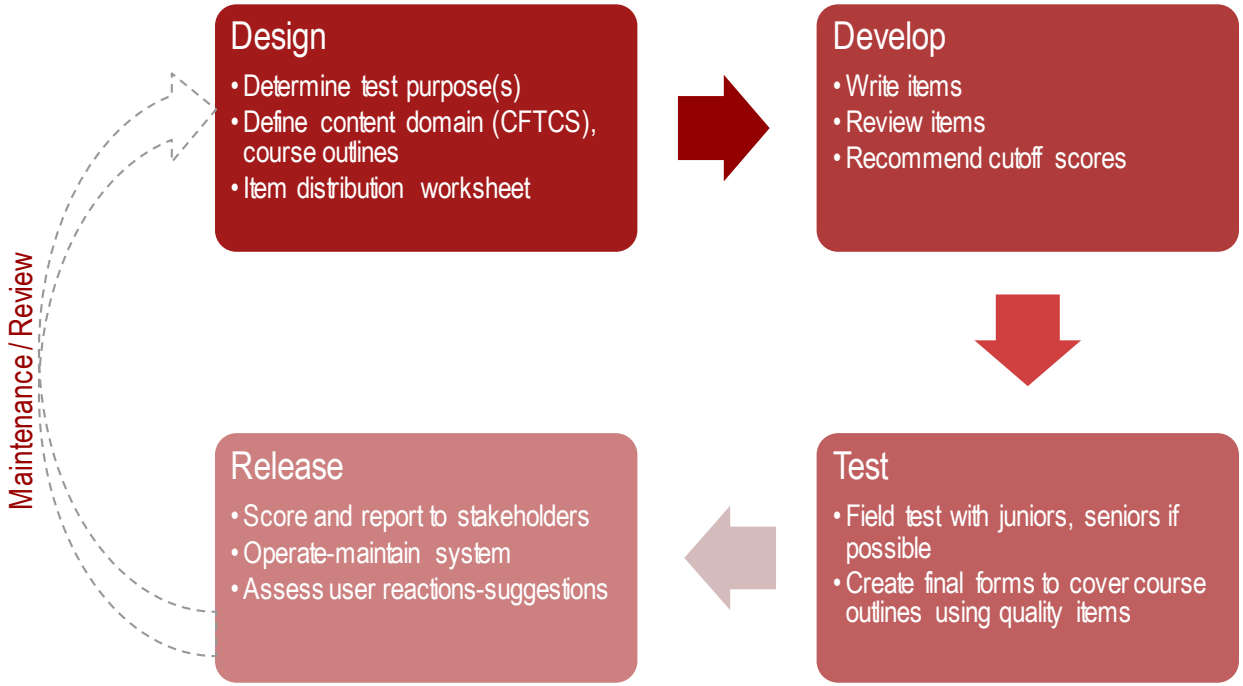
Outcome	**2.1. Human Body Form, Function, and Pathophysiology: Discuss the various human body systems, alterations related to the normal aging process, and possible dysfunctions.**
Competencies	2.1.1. Describe the physical characteristics, components, and function of blood (e.g., ABO, Rh, blood cells, precursors and respiratory). 2.1.2. Describe the cardiovascular system, and trace the path of blood and factors affecting blood flow. 2.1.3. Describe how blood pressure is controlled and the factors influencing changes in blood pressure. 2.1.4. Describe the function and components of the respiratory system and pulmonary ventilation and factors influencing respiratory rates. 2.1.5. Describe nerve tissue and the nervous system, including regions of the brain and their function, the spinal nerves, signal transmission at synapses, and the sympathetic and parasympathetic system.

CTE TEST DEVELOPMENT

Where do tests come from? Ohio "instructor teams"

- Secondary instructors – with Post-Secondary and business input – drive content domain-alignment, develop-review items & recommend cutoffs

Test Development Cycle



How Are New Items Created?

- Pathway consultant lays out course outline using strands-outcomes-competencies (from CFTCS) – to structure each test bank
  - ALL in new CFTCS [formerly only Essential competencies]
  - Item writers (18-22) for workshops in 2+2 format (two WS model)
  - Orient-train on process using AdobeConnect webcast (distance)
  - At workshop, reorient, break into teams with facilitator (who operates database form); create items with large group review (Days 1-3, 4)
  - How to get more items for bank to support pretesting, practice tests?
    - Still … considering: item writing by instructors with web drop off & QA
    - Still … considering: collaborating with other states to share items

How Is QA Performed?

- Quality Assurance is best practice – so how does WebXam staff accomplish this component?
- Part 1 involves expert review by item writing committee
  - Face-to-face for test security: Large Group Review (Last Day)
  - Evaluate all items in each EOC item bank on technical accuracy and correctness (first pass)
  - Then, use tablets to rate items and modules (second pass)
    - Essentiality, Quality, Proficient-Advanced Cutoffs for EACH item
    - Finish by rating overall quality of item bank on 7 scales

How Are Items Field Tested?

- Part 2 is a field test to identify item statistics
  - Practice WAS to post items on WebXam for one testing cycle, then create "operational" forms for accountability the next year
    - Conduct item analysis to ID the poor items (too difficult-easy, not good at differentiating high-low scorers)
    - Test form was out of use, creating issues in accountability reporting
  - NOW using "live beta" model – data rescored to select live form and report out to ITC-districts (ended field testing 5-2-14 to accomplish) – field testing memo released in December 2013

CHANGES 2013-14

- Districts no longer pay for assessments (since 2011)
  - Exceptions: Employability, Diversified Health Occupations
  - No more paper-pencil tests offered
- Teaching Professions portfolio assessors now part of WebXam (instead of stand-alone) – rubric ratings
- Teacher test reviews to be held at CETE or your sites (handouts include our guidance document)
- Forms maintained (moving toward 40 items)

PATHWAY WORKSHOPS TIMELINE

- Fall 2013 through Winter – Spring 2014
  - Exercise Science & Sports Medicine
  - Allied Health and Nursing (2 workshop options, depending on expertise)
  - Ground Transportation (2 workshop options, depending on expertise)
  - Health Information Management
  - Information Technology (four pathways)
  - Air Transportation
  - Personal Care Services—Cosmetology-Barbering
  - Bioscience (Biotechnology-Food sets of courses)

COMPLETED WORK

Career Field	Pathway	When
Construction	*MEP (HVAC-Elect-Plumbing)* *Structural (Carpentry-Masonry)* *Design (Drafting, Construction Mgmt, Building)*	Field Test
Health Sciences	*Therapeutic* *Allied Health & Nursing* *Biomedical Technology* *Health Information Management (Dec 2013)*	Field Test (Feb 14)
IT	*IM (2014)* *ISS (2014)* *NS (2014)* *PSD (2014)*	FY14 Write; FY15 Field Test
Law-Public Safety	*Criminal Justice* *Firefighter EMT (state licensing for 3 courses)*	Field Test
Manufacturing	*Operations (Welding, Precision Machining)* *Design (Engineering Drafting, Robotics, CIM)*	Field test
Transportation	***Ground (Oct-Nov 2013)*** ***Air (May-Jun 2014)***	FY15

EXPECTED WORK: 2014-15

Career Field	Pathways	When
Agricultural-Environmental	*Details forthcoming*	Fall 2014
Business	*Details forthcoming*	Fall 2014
Finance	*Details forthcoming*	Winter 2015
Marketing	*Details forthcoming*	Winter 2015

II. Pre-Post Testing

- CETE awarded ODE-approved vendor status in 2014
- Developing pretests to document student growth
  - Sequenced by count (larger pathways, courses first)
  - Design for test forms: 40-item pre and post; 25% common items
  - Need items—Considering new ways to replenish item banks
  - Introduce in EOC pathways during FY15, others as CFTCS converted to course structure and demand expressed
  - Charge to support PRETEST delivery ($1.50-$2.00)

III. Teaching Professions

- TP pathway, part of Education-Training Career Field, uses portfolio to evaluate technical skill attainment
  - New tab on left – "Assessors" used by teachers to select two persons to read and evaluate the portfolio with rubric
  - Capability to "call" a third assessor if overall scores differ >15
  - In 2013-14, expecting 600-700 students to be assessed
  - System use in scoring-storing other rubric-based performances such as projects or capstones

SUMMARY

- CETE staff follows best practices to develop, deploy, and maintain the Ohio CTE testing system
- Try to be responsive to input from local districts and collaborators ODE & OBR, consistent with score credibility
- Request YOUR assistance to complete item writing and review during 2014-15, regular maintenance afterward, and continue cycle
- Plan strategically – pretest, performance, data-driven decisions
- If you want to be at the table, contact CETE recruiters to express interest (or ODE pathway consultants in Ag, Business-Finance-Mktg)
  - moore.179@osu.edu or moore.1149@osu.edu

Student Learning Objectives

- Student Learning Objectives one way to measure growth, in CTE this begins with technical content standards so that WebXam post-tests can be used
- Defined as "Measurable, long-term academic growth targets that a teacher sets (yearly) for all students or subgroups"
  - SLOs demonstrate a teacher's impact on student learning within a given interval of instruction based upon baseline data (initial status during school year)
- Each SLO should include (guidance, rubrics flow from these components)
  - Baseline-Trend Data from Student Population included in the SLO (previous performance, who)
  - Interval of Instruction covered by the SLO, standards the SLO addresses (length, content)
  - Assessments used to measure student progress, Expected Student Growth, & Rationale for the expected growth (tests, growth, why)

Baseline and Trend Data	Student Population	Interval of Instruction	Standards and Content	Assessment(s)	Growth Target(s)	Rationale for Growth Target(s)
What information is being used to inform the creation of the SLO and establish the amount of growth that should take place within the time period?	*Which students will be included in this SLO? Include course, grade level, and number of students.*	*What is the duration of the course that the SLO will cover? Include beginning and end dates.*	*What content will the SLO target? To what related standards is the SLO aligned?*	*What assessment(s) will be used to measure student growth for this SLO?*	*Considering all available data and content requirements, what growth target(s) can students be expected to reach?*	*What is your rationale for setting the target(s) for student growth within the interval of instruction?*
☐ Identifies sources of information about students (e.g., test scores from prior years, results of preassessments) ☐ Draws upon trend data, if available ☐ Summarizes the teacher's analysis of the baseline data by identifying student strengths and weaknesses	☐ Identifies the class or subgroup of students covered by the SLO ☐ Describes the student population and considers any contextual factors that may impact student growth ☐ If subgroups are excluded, explains which students, why they are excluded and if they are covered in another SLO	☐ Matches the length of the course (e.g., quarter, semester, year)	☐ Specifies how the SLO will address applicable standards from the highest ranking of the following: (1) Common Core State Standards, (2) Ohio Academic Content Standards, or (3) national standards put forth by education organizations ☐ Represents the big ideas or domains of the content taught during the interval of instruction ☐ Identifies core knowledge and skills students are expected to attain as required by the applicable standards (if the SLO is targeted)	☐ Identifies assessments that have been reviewed by content experts to effectively measure course content and reliably measure student learning as intended ☐ Selects measures with sufficient "stretch" so that all students may demonstrate learning, or identifies supplemental assessments to cover all ability levels in the course ☐ Provides a plan for combining assessments if multiple summative assessments are used ☐ Follows the guidelines for appropriate assessments	☐ All students in the class have a growth target in at least one SLO ☐ Uses baseline or pretest data to determine appropriate growth ☐ Sets developmentally appropriate targets ☐ Creates tiered targets when appropriate so that all students may demonstrate growth ☐ Sets ambitious yet attainable targets	☐ Demonstrates teacher knowledge of students and content ☐ Explains why target is appropriate for the population ☐ Addresses observed student needs ☐ Uses data to identify student needs and determine appropriate growth targets ☐ Explains how targets align with broader school and district goals ☐ Sets rigorous expectations for students and teacher(s)

SLO: Baseline

- *What information is used to inform the creation of the SLO and establish the amount of growth that should take place within the interval?*
- Identify sources of information on your students – what could you use?
  - Test scores from prior years & results of pre-assessments
  - Summarize student strengths and weaknesses based on the data
  - What data do I currently collect? What does the analysis of data reveal?
  - Am I looking at trend data over time? Do I need additional data to make an informed decision?

SLO: Student Population(s)

- *Which students will be included in this SLO? Include course, grade level, and number of students*
  - What students do I intend to measure?
  - Am I measuring growth for all students as well as some particular sub groups?
  - Has my building or district identified any subgroups on which I could focus? What about IEP students?

- Identify sources of information on your students – what could you use?

SLO: Interval, Standards

- *Which time interval will be included in this SLO?*
  - What school year or part of a school year do I intend to measure?
  - Is district adopting courses yet?

- Identify sources of information on your intervals & technical standards – what could you use?
  - Ohio CFTCS is probably best for alignment to post-tests
  - Or national standards systems (construction, transportation)

SLO: Assessments, Targets

- *Which assessments will be included in this SLO? Which targets?*
  - What students do I intend to measure?
- Identify sources of information on your assessments – what could you use?
  - LEA-developed, vendor provided, eventually credentials if available and approvable
- The Goldilocks Dilemma in targets
  - Too broad → difficult to measure well
  - Too narrow → too discrete and piecemeal