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Embedded Credit/Academic Integration
Bring and Sling - NOTES
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MATHEMATICS INFORMATION:

1. Structure of Offerings
 - a. Credits Earned
 - b. When Credit is Awarded (each semester, yearly, end of two-years)
 - .5 per year – 1 credit over 2 years – must be in a 2- or 3- hour block course. All students complete the work and the scores are in the gradebook. 7 programs have math. 80% average to get credit.
 - 1 credit (1/2 unit of credit each year). Must complete both years of the program.
 - Full credit end of 2 years. Must be a program completer. Home high school issues credit when they desire.
 - 1 unit of credit.
 - ½ credit per year.
 - Each semester .25 credit (1/2 credit per year).
 - End of year it is transcribed. 80% minimum to get credit.
 - Award after completion of course – must have 80% - 1 full credit.
 - 1 credit after 2 years (must complete).
 - 2 sending schools recognize it as an elective vs. math credit.
 - ¼ credit per semester. Don't have to complete the entire program to get credit. Can switch program.
 - ½ unit per year.
 - Letter Grade given and must complete all competencies.
 - c. Title of Course
 - Integrated Math IV
 - Technical Mathematics
 - Technical Math
 - Integrated Math (headed towards that name/concept). Technical Math currently.
 - Integrated Math
 - Embedded Math
 - Tech Math I & II – but home school transcripts however they like.
2. Delivery of Content
 - a. Pull-out or embedded/integrated
 - Comes to classroom 2 times a month. Also incorporate w/n the classroom
 - Some programs are pullout.

- 5 classes – CAD, Info. Systems Tech, Ag., Life Careers (special ed. program). Integrated math only for block students – pull out basis for others. Give one presentation and get grade for both.
- Pull out program. On-line system – Moodle. 10-12 students enrolled this year.
- ALEK is used at Hillyard (St. Joe) for remedial. Provided training – pull out program. Have to do it at home if don't get done.
- 2nd year – same math concepts – but different aspects.
- Much repetition for the 2nd year. Some have blended 1st and 2nd year students.
- Have all objectives and track over the course of 2 years.
- Pull outs only if needed extra help.
- 8 programs he goes into. Every child gets the lesson whether enrolled or not.
- All students must go through the course work.
- All students enrolled in the program.
- Pullout if needed.
- Lebanon fully integrated – no classroom – work w/ teachers and plan lessons. Grade and credit issued.
 - b. Who oversees the program – is there a certified instructor on staff
 - No – Boonslick
 - Yes – LCTC
 - No – Joplin
 - Yes – Lebanon
 - Yes – Pike-Lincoln
 - Yes – Cass Career Center - Harrisonville
 - Yes – Kirksville (part-time)
 - No – South Central Career Center – West Plains (had one before – budget cuts)
 - Yes – Grand River Tech - Chillicothe (hired in 1998) - 2005 started Embedded credit option.
 - c. Who grades the assignments
 - Math teacher grades. – Cass Career Center
 - CTE instructor grades – math only grades if retest.
 - Lebanon fully integrated – no classroom – work w/ teachers and plan lessons. CTE teachers only. – so they grade.
 - d. How validated by a highly-qualified instructor
 - Students cannot test out and get the credit. 2nd year is higher level concepts.
 - PLC school – every Wed. collaboration meet – CTE teacher meets w/ HS math instructors.
 - Questions about PD – Math for CTE Business and Health Sciences. Teacher of mathematical concepts. Terminology was the biggest issue.
 - MCCE is working on translation guide along with Common Core and sample lessons.
 - Review yearly changes needed. Tailored to the guidelines.
 - Need a full-time teacher in the classroom.
 - How is coding in Core Data don when team teaching or if don't have a math teacher?
- 3. How it is Implemented
 - e. Who delivers the lessons
 - Jointly w/ CTE instructor input. Assists in the classroom.

- Minimal pull-out – most pull out was for re-teaching/relearning opportunities.
- Co-teaching works really best.
 - f. What Power Standards/Objectives are covered – cross-walked w/ standards (CLEs, Common Core, Show-Me standards, etc.)
- Cross-walk w/ Show-Me Standards and national math standards and will common core.
- MCCE is cross walking w/ the instructional frameworks and common core. GLEs and CLEs. Competencies are being aligned with common core. Will be on a DESE website – made available to all folks. June 30 is target goal.
 - g. How are the lessons developed
 - Jointly w/ CTE instructor.
 - Making it applicable – applied to what they are going to use.
 - Depth of Knowledge – top level in applying the information.
 - Introduce math vocab. within the lab context.
 - Meet w/ content instructor – math terms vs. content terms.
 - 9th hour collaboration every day (Cass Career Center).
 - Relevancy and rigor – up on the DOK.
 - Prepare for Common Core – promoting skills in our students.
 - Statewide curriculum – especially when a new person comes on staff.
 - Sharing of lesson plans and put all on website to share.
 - h. What is the standard for grading
 - Most were 80%.
 - One allowed for any grade but had to complete all competencies.
- 4. What Assessments are Used
 - a. Standardized
 - Pulls from other assessments. Just for the embedded credit.
 - General employability.
 - Local classroom.
 - b. Common/Formative
 - Fractions – decimals - percents, measurement, integers, ratios/proportions.
 - Developed locally.
 - Project based – CTE, math, communication arts – all together (estimates can do this).
 - Graded by communication arts and ag. – content and communication arts.
 - One test but customized to the CTE program “wording”.
 - c. Summative
 - Summative pre-test, mid-year, post.
 - Same assessment in each program – LCTC.
 - d. Local/classroom assessment alignment w/ various Technical Skills Assessments, End of Course, COMPASS, etc.
 - Boonslick – COMPASS test beginning of 1st year. Could work on their skills to help raise on voluntary basis. Sr. only and they may get extra help.
 - LCTC – COMPASS test given Jr. year at the beginning and end of Sr. year.
 - SCCC – TSA looking at diagnostic. side of COMPASS.
 - CCC – COMPASS
 - Kirksville - TABE and teachers also took TABE.
 - Lebanon - TABE pre/post.

- WIN – Career Readiness Certificate (1/2 hour a week) to complete – locating, and reading information.
 - Joplin - TABE – pre-post test.
 - Boonslick (and several others) Aligned to TSA
 - FFA – EOC exam – great math information
 - SkillsUSA – exam – take written questions out.
5. Sharing of Lesson Plans/Templates
- File of lessons.to share will be developed by B. Kurtz at LCTC.
6. Other
- Survey about opinions of math pre and post.
 - Data collection – content and written as well. Use of scoring guides. Assessed based on lab observation.

COMMUNICATION ARTS INFORMATION:

1. Structure of Offerings (Credits Earned, When Awarded, Title of Course)
 - **Hillyard** - ½ credit per year – full credit over 2 years. Transcript through high school (they transcript based upon what students need for credit – choose name of course). Communication Arts & Math (use ALEKS for math) - from general math to trig – choose level based on students’ current level of math. During enrollment (advisement night), they send someone from career center to talk about programs to advertise/recruit. Have student ambassador program (director interviews all) take 8th graders around building for tours.
 - **Franklin** - Applied Communication Arts & Technical Math – 1 full credit for 2 years (transcript .5 credit per year) – sending high school transcripts – all students do work, but students choose whether or not to transcript the grade. Students sign a commitment form before they begin. Also planned on offering Life Science in Bio-Tech & Health Science as Science credit. Typically TABE test, but weren’t able to this year due to conditions. Currently searching for another test to use. English teachers @ home high schools were pleased that Communication Arts standards were based upon “real-life” work writing.
 - **Moberly** - Involve your sending schools’ department heads/chairs – they set up a consortium for each embedded credit area w/ teachers from each of their sending schools. Found it easier once the sending schools were involved. Integrated English – 2 year program – ½ credit awarded each year. Struggling with the record keeping and grades. Recovery credit – may also work with graduating seniors who need a full credit w/ recovery so that they can earn the full credit their senior year.
 - **Lebanon** – integrated/part of classwork & everyone participates. Embedded credit grades reflect upon the students’ technical course grade. Math & Communication Arts credit are accepted by 4-year colleges. Math includes trig & English includes research-based projects. Class names are English IV & Math III.
 - **Fort Osage** – Health Occupations – 1 full general science credit for 1st semester only. Students usually have science credits needed, so not many take advantage of this option. Getting ready to work with guidance departments at sending schools for Communication Arts. Wanted to name classes Technical Math & Technical English, but wanted information/input from schools already doing this.
 - **Eldon** – hasn’t embedded credit, but have focused integration and rigor instead. Haven’t needed to embed credit yet. Focused on development of Personal Plan of Study (PPS) –

Stang Night – CTE teachers work with 8th grade students from Eldon High School to develop PPS. Some discussion from group surrounding PPS & POS, core/MSIP standards, MRI – non-fiction reading, process writing, etc.

- **LCTC** – students may earn 1 full senior English level credit, Technical English. ¼ credit is awarded at the end of each semester – ½ credit per year over a 2-year period. All students enrolled in CTE program offering embedded credit English participate. 80% or higher grade is required in order to earn credit. Technical English grade is transcribed separately from CTE course grade. Transcribing of credit is completed at home high school. One sending school is not participating.
2. Delivery of Content (Pull out or embedded/integrated)
- **Hillyard** – pull-out program (35 min./week), web –based activities/curriculum. 1.5 hour minimum. of homework expected, New American Literature standards (online) used for curriculum. Supplied group with copies. Certified math & communication arts teachers @ career center. Use bell ringers (10 minutes ea. morning) for both subjects. Using the diagnostic e-COMPASS test results (\$6.60/student). Using scores for PLAN test, if student is on track, then they are not tested on e-COMPASS. Beginning of junior year they are tested. Placement e-COMPASS as post-test. Kept EC like what they had at their home high school so that students don't miss out on that instruction. Communication Arts teacher teaches lesson in CTE classroom to the AM classes, then CTE teacher teaches that lesson later in week to PM classes.
 - **Cass Career Center** – also using e-COMPASS test & has longitudinal data available online. Have had 2 programs – 1st way was embedded credit – hired English teacher for grading. Brought in English teachers from all sending schools & designed curriculum from this collaboration. Use Vocational & Career English CIP #. Clearing House & 4-year colleges accepting embedded credit was an issue. Program became too large too quick. 2nd way -- Has suggestions for funding positions for certified teacher on staff at career center. .25 credits/semester. All students are enrolled in embedded credit. Pull-out program, but integrated for each program. All work is geared toward programs. Communication arts - 16 objectives – 4 objectives/semester. Math – on 3rd math teacher (from industry). Don't use the word embedded credit – integrated model now. Article in Techniques January 2007. Another article in next/upcoming issue. Classes are called English IV & Math IV at Harrisonville, transcribed as a grade – some sending schools call it whatever they want. Clearing House may not accept this, but 4-year colleges do. Didn't try to compete with the high schools. When hired consultant – math teacher - & they reviewed curriculum, found they taught a lot of math but not at a high level. Your own district may be your biggest critic. Glad to work with anyone who asks. They currently don't use for agriculture, business or marketing classes.
 - **Franklin** – teachers at high school for core areas – do not have certified staff @ career center. Each school transcribes own credit (school of record) – saved @ least 1.5% of students from not being able to graduate due to lack of credit – enabled them to graduate w/ embedded credits. Transcript ½ credit @ end of year.
 - **Fort Osage** – has certified English instructor on staff. Wants to use sign up/commitment process for students next year.
 - **Columbia CC** – Pre/Post test – comprehension, visual literacy – grading rubrics have been developed. Culinary Arts curriculum examples – process paper, restaurant reviews, chef profile paper – utilize professional articles for examples – certified English teacher uses rubrics to grade w/ CTE teacher & CTE teacher records final grade. Heavily weighted

towards writing. Do not award credit, but did this to increase the rigor of English content in course & support Perkins requirements for Communication Arts/Math.

- **Macon** – shared information describing Math & English. 1 credit for the two-years. Do not offer partial credit. Sending schools transcript grades.
 - **LCTC** – one credit awarded over 2 years – transcript ¼ credit per semester. Technical English, Technical Math, Technical Science. Offer embedded English/Math – 45 min. per week in classroom – certified English instructor – Marzano strategies used. Also teaches CTE instructors better strategies to use in classroom with students. Collaboration with home high school depts. & utilizing identified Power Standards approach. English teacher primarily does bulk of grading for English – CTE teacher grades for content.
3. How it is Implemented
- **Columbia Career Center** – examples – in electronics class – 100% of students are typically college bound – theory of operations – tell why circuit works – write about it as electrical engineer for other electrical engineers – then revise to send to upper management for cost justifications – by end of semester – make a sales pitch for the device for the public. Auto Tech – how-to/process papers – electrical systems, brakes, suspension – based on work they would do in field. Short responses to customer complaints – more in a managerial role. Comprehensive written response to repairs for high end auto manufacturers (Mercedes-Benz).
 - **Cass CC** – At first, teachers would want to leave when certified English teacher was in room – director required that CTE teacher would team teach with the certified English teacher. Everything has been cross-walked & their teacher has been involved with Common Core Standards. Funding – use Perkins funds – at-risk funds were used a couple of years ago (these are being reviewed again), set aside funds (mini-grant?) to use to fund part of teacher salary. Could also include in tuition costs to help fund for these positions.
 - **Franklin** – developing resume, prep for mock interviews, when they have their career fair students must talk with people and complete a writing assignment (type it afterwards). All instructors start with a standard rubric and tweak for their program, but most follow the original pretty closely. Article reviews, written estimates for repairs. Has to work closely with CTE teachers since they don't have English & math certified teachers on staff yet.
 - **Lebanon** – had to title certified English/Math instructors as Basic Skills Instructor to be able to use Perkins funds. At first started as ½ time positions fully funded by Perkins. Sometimes English/Math instructors shuffle their schedules so that they can sub for a CTE teacher who is going to be out, just change day they are going to be in classroom that week. In beginning – certified teachers always taught lessons, then enabled CTE teachers to deliver lessons – now more of a joint or co-taught lesson. Primary teacher always grades content – English teacher doesn't review until content is OK. Build relationships with CTE teachers. Require 80% D, 85% C, 90% B, 95% A. Did experience some friction with high school English teachers – some students did work in junior English class and had received a passing grade, but the same paper had earned a D or F grade at career center. Invite high school teachers to come to career center for PD – CTE teachers provided rigorous lessons that integrate academics/CTE content. Allow high school teachers to bring their students to career center to apply what they are learning in math class.
 - **Rolla** – funding – hired a Math, Comm Arts, Science teacher for 1 hour. Have a teacher in building for 1 hour a day as an “instructional leader”. Also meet once a month to collaborate after school with CTE staff.

4. What Assessments are Used

- **Kirksville** - TABE – pre/post; divided into Math/Comm Arts data teams; gave all CTE teachers the TABE test – was eye opening for instructors – good experience. Data teams meet once a week – giving assessments in CTE classes now – working with certified teachers to analyze data.
- **Hillyard** – eCOMPASS – had teachers take this assessment – some took seriously, some didn't. Changed from TABE because they didn't get any accountability from students – once started using eCOMPASS w/ diagnostics for pre-testing, were able to pinpoint where students needed help. Entrance into college – won't have to take remedial classes.
- **Cass CC** – helps validate using external assessments.
- **Franklin** – all of shops have to have OSHA 10 certification -- \$18/each. Instructors also must take the exam (were resistant at first). Was a painstaking process – had to integrate into classroom. Students are very proud of their accomplishment – they now have OSHA 10 certification cards (as well as instructors). Weren't able to pre-test using TABE this year due to circumstances – but are going to post-test students @ end of this year. Students are allowed 2 attempts with school paying for testing – parents/students had to pay for any testing beyond that.
- **Lebanon** – WorkKeys – use program for students to be able to get remediation for math.

5. Sharing of Lesson Plans/Templates – handouts on disc & paper format.

6. Other/Issues/Questions:

- Additional credit given – see MCCTA website – Keith Davis, Lebanon, has a PowerPoint with data re: allowing this option.
- Scoring Guides/Rubrics – for writing assignments from any schools that provided them – ensure everyone gets a copy of these examples – it was noted that some had been supplied by schools and these are on the CD everyone received when they checked in.
- Question was asked -- Is anyone awarding Employability grades – Franklin Tech asked this - (Work Ethics, etc.)? Columbia CC is doing this. LCTC uses Work Ethics as part of CTE grade each quarter.
- PLTW – high school had issues with PLTW being taught at career center, thought it was too high level for career center to teach.
- Emailed 2-page career center newsletter – went out to all sending schools, high schools, teachers – students' parents, students. Good way to get info into community. Articles in district newsletter or send to sending schools & home district to include info on website/newsletters.
- Rotation during PD for high school teachers at career centers.
- Columbia Career Center - Virtual Tours – 9th grade via website/video – tied to career clusters. Skills Expo Night for public – demonstrations of students' skills/abilities.
- Special education (IEP) students' placement an issue for some schools.
- St. Louis – wants to require programs to have writing component – any way to make it rhetoric based? Suggestions – utilize reflections, APA, research-based projects; in common core state standards – appendix C of manual has examples of good writing – would lean towards argumentative text writing.
- MCCE - Michelle - Group of teachers reviewed Common Core Standards – to look at what this means and how does this translate to CTE. Still developing – creating PD opportunities around this – integrating with Common Core & what CTE can do with this. Developing translator guides – glossaries/vocabulary in layman's terms -- for each of the common core standards. Hope to unveil some of what has been developed so far at MCCTA Spring

Conference. Standards for teaching English are included in the Common Core Standards. There are going to be more opportunities for this type of collaboration between high school & CTE teachers. On DESE's website – things districts can do to start working on Common Core Standards implementation now. Reviewing textbooks, curriculum being used now.

- DESE - Common Core State Standards are not supposed to be revised for the next 5 years (2016). 2014-2015 will be the transition year to Common Core Standards.

GENERAL COMMENTS:

Suggestions from Administrators to those “considering” starting

- ALEK – cost \$22 per student.
- Bell ringers with core content.
- Push-in programs vs. skills lab works better.
- E-COMPASS for diagnostic purposes.
- Communicate with English and math instructors from all your sending schools and build relationships with those folks.
- Seek out the new standards (and Common Core).
- Take a tour of a school and bring the “nay-sayers” with you.
- Have Board of Ed. approve the proposal.
- Create a true “4th” level (or last level within the sequence).
- Have a certified teacher on staff for each Embedded/Integration piece implemented.
- Seek approval (written) from DESE in the event of an audit. Jocelyn Strand's name was given as a contact person at DESE in School Improvement.
- Survey your advisory committee members and ask their opinion of what is needed. Get them on board as advocates.
- Must have a teacher!
- Team teach and cooperation among staff members is important.
- Must be integrated/embedded into the curriculum vs. pull out so that CTE skills can be taught/mastered.
- Meet at MO ACTE for Embedded Credit/Academic Integration collaboration and workshops.