

## 2021-2022 Transfer Program Audit Report FALL

### PROGRAM QUALITY – TRANSFERABILITY:

1. Discuss how your department determines that the courses offered are still viable and relevant?

The department watches enrollment patterns in our courses. In addition we work with other departments to ensure our prerequisite courses are covering the required material. This has even been part of departmental assessment reports. In addition, the department has been in communication with local universities to ensure transfer of our courses, especially new courses. The department also attends annual math conference to discuss course offerings and content with colleagues from around the state.

2. Does course curriculum satisfy DTA requirements? How do you know? What needs to change?

Yes. College level math courses satisfy the SQR and MS requirements of the degree.

3. Please construct a table to show all courses offered by your department and how they transfer to CWU, EWU, and WSU. Identify any courses that do not transfer or transfer as general electives.

#### BBC

Course Number	BBC Course Name	WSU	CWU	EWU
MATH 090	Prealgebra	Non-Transfer	Non-Transfer	No Equivalent
MATH 094	Introduction to Algebra	Non-Transfer	Non-Transfer	MTHD103
MATH 097	Elementary Algebra II	Non-Transfer	Non-Transfer	No Equivalent
MATH 098	Intermediate Algebra I	Non-Transfer	Non-Transfer	MTHD104
MATH 099	Intermediate Algebra II	Math 101 (No Credit)	Math 100 (No Credit)	MTHD104
MATH&107	Math in Society	Math 105 (QUAN)	MATH 101	Math 107
MATH&131	Math for Elementary Ed I	Math 1XX	No Equivalent	No Equivalent
MATH&132	Math for Elementary Ed II	Math 1XX	No Equivalent	No Equivalent
MATH&141	Precalculus I	Math 106	No Equivalent	Math 141
MATH&142	Precalculus II	Math 108	Math 154	Math 142
MATH&146	Intro to Statistics	STAT 212	BUS 221	Math 121
MATH 147	Finite Math	Math 201	Math 130	Math 200
MATH&148	Business Calculus	Math 202	Math 170	No Equivalent
MATH&151	Calculus I	Math 1XX (QUAN)	Math 172	Math 161
MATH&152	Calculus II	Math 171	Math 173	Math 162
MATH&163	Calculus III	Math 172	Math 272	Math 163
MATH 220	Linear Algebra	Math 220	Math 265	Math 231
MATH 230	Differential Equations	Math 315	Math 376	Math 347
MATH&254	Calculus IV	Math 273	Math 273	Math 241

4. If some of your courses are not transferring to universities as you expected, what information and/or assistance do you need to help you resolve these transfer issues?

The department does not expect our below college level courses (MATH 090-099) to transfer to universities, so these are not a concern.

Our MATH& 131 and MATH& 132 courses were developed in conjuncture with CWU staff and faculty with the sole purpose that the courses would transfer to their schools. This is why it is not a concern that EWU does not accept them. However, it was a surprise that the school does not have them on their transfer guides. We will follow-up with Central about next steps to update the guides.

It was a surprise that MATH& 141 did not transfer as it is a common course number. This will also be a point of communication when we reach out about the other two courses.

MATH& 148 is also a common course number, so it was a surprise it did not transfer to Eastern. We do not have a contact at Eastern. Therefore, the assistance we would need is who to contact about seeing if we can get this course to transfer appropriately.

#### **ADVISING RESOURCES:**

5. Please review your department catalog and website information. Is the information current and accurate? What changes need to be made or would you like to make to better assist students?

See google doc: [Link Here](#)

6. Has your department developed advising resources/maps to assist students majoring in your discipline or in a related field? Please describe these advising resources/maps. Have you considered developing transfer resources (such as four-year advising maps) for students intending to transfer to CWU, EWU, or WSU and major in your discipline or in a related field? How could BBCC assist you in developing these resources?

A pathways flowchart has been developed. It does need to be updated for new course offerings (131/132 and JIT courses). In addition, we partner with different support services on campus, such as the TRiO STEM Grant to help with transfer planning.

In the future, the TRiO STEM grant could develop a transfer guide for future mathematicians and math instructors to help with advising.

#### **SCHEDULING:**

Please review your course offerings and enrollments over the last three years as well as the FTE information for your department.

7. Discuss how the scheduling for your courses has been evaluated. Describe how scheduling has been altered or maintained to meet the needs of other programs or populations of students.

Class are scheduled around other STEM major course offerings to ensure students can transfer with STEM degrees. Courses required for the nursing program are offered around other nursing prerequisites. In addition, night classes are offered to allow working adults to earn their DTA and satisfy the SQR requirements. Also, online course offerings are offered as well. Prior quarter and year schedules are reviewed for under enrolled or overenrolled courses to adjust number of sections offered. The number of course offerings is data driven, based on prior quarters and years.

8. Has this program considered providing other options for offering the program content; such as, online, hybrid, nights, competency-based, weekends, etc? Discuss.
  - a. If yes, what is being considered and why?

Yes, many courses are offered online, hybrid, and nights.

- b. If no, is this something that should be considered and why/why not?

Weekend and competency based courses are not currently offered in the department.

9. Discuss future plans for annual scheduling based on this audit review. Please share how annual scheduling will need to change to meet future student needs as well as any department needs you have identified with respect to instruction.

The department is satisfied with the current annual schedule process. It is reviewed quarterly and adjusted based on student need and changing program demands. Courses are offered in many modalities to meet the needs of our diverse student population.

**TRANSFER PARTNERSHIPS:**

10. Provide information about how this department is involved in building and/or maintaining specific partnerships/relationships with one or more of our three transfer institutions (WSU, CWU, EWU). List and identify the partners/transfer institutions, describe the relationships that have been established, and what is planned for the future to establish better connections with our transfer institutions.

In the past, trips to STEM programs at WSU, CWU, and EWU have been scheduled with math faculty going as well as chaperones. In addition, we are in regular communication with CWU to ensure our math for elementary education courses are meeting the needs of their program cohort hosted on our campus. The department takes care to offer common course numbered courses that will transfer seamlessly to local universities. There are currently no future plans for any changes.

**CAREER GUIDANCE:**

11. How does your department provide career counseling with information on employment trends, wages, and opportunities to assist students plan their education? What resources do you need to assist you in providing career counseling information to your students and advisees?

The department does not currently offer any formal career counseling. However, we are open to the career center to provide us with documents that would be helpful as we assist students in planning their education.

## 2021-2022 Transfer Program Audit Report WINTER

### **PROGRAM QUALITY – INSTRUCTION and STUDENT ACHIEVEMENT DATA:**

1. Select all methods that are used by your department to integrate the academic knowledge and skills of your students and ensure that they are taught with the same coherence and rigor as all other students. Please provide short descriptions of each selection.

Contextualized Instruction

Team-Teaching

Math-First Initiatives

College-Level Core Curriculum – IO #2

College-Wide Student Learning Outcomes – IO #2

STEM Initiatives – STEM Center support, grant work (Title V & III), TRiO STEM Grant, ESCALA

Tutoring – partnering with STEM Center for student support, tutoring, office hours

Flipped Classrooms – used in multiple courses by several faculty

Just in Time Support Instruction/Accelerated Learning – DVS 071, 070

Active Learning/Student Engagement Techniques – Group work, challenge problems, metacognition, STATS Fair

Project Based Learning – projects used to assess learning outcomes, STATS Fair

Industry Standardized Tests/Exams

I-BEST Programs

Other (Please describe.)

2. Please use the student achievement data provided to discuss and review how successful students are within your classes. Are there certain classes with student success rates below 70%? Using the disaggregated data available, what achievement gaps do you observe and which of these gaps are you focusing your efforts on?

Courses with lower than 70% success rate in 20-21: MATH 094 (54%); 098 (51%); 099 (56%); 141 (68%); 146 (61%); 151 (57%); 163 (63%); 220 (50%). The department noted that these success rates are from the COVID online year. This provided extra challenges to both students and faculty alike, including limited access to tutoring center and on campus supports. Many students expressed a desire to not do their math courses on Zoom. The department wants to track these numbers moving forward as we return to the classroom and students have more choice.

At this time, disaggregated data has not been provided for the department to analyze.

3. Please describe what you are doing as a department to increase student success, especially within courses that exhibit low success rates or that indicate achievement gaps exist for some student groups? How are you closing the loop to see if your efforts have made improvement or not? What further steps do you plan to pursue?

The emporium courses are reviewed regularly for gaps in content.

Courses are offered in multiple modalities to give students choice of course delivery content

The department is focusing on professional development to improve instruction, including eLearning and Design Certificate training to improve our online instruction, faculty colloquium, division book club focusing on pedagogy, WAMATYC and AMATYC conferences, ESCALA

Department assessment works on identifying key courses where improvements can be made and following the change over time to close the loop and assess their effectiveness. Future projects include redesign of the statistics and pre-calculus curriculum.

4. Are there additional insights you have observed when looking at student grade data within courses? Please highlight one or more of these observations.

First college level courses tend to have lower success rates, including MATH 141, 146, and 151. It is possible that students are struggling to make the transition from high school math course work to college math course work with the increased pace and rigor.

Precollege math also has low success rates. This could be because the emporium was not designed to be delivered in an online format, but the department plans to watch these numbers with the return to campus.

5. Please review your department's 7-Year Plan and Course Crosswalk for accuracy and completion. Does the course crosswalk accurately reflect the courses offered by your department? Are all courses offered being assessed once within a seven year span and are all program outcomes included within your department's courses assessed at least once during the plan. Update your plan to include seven years moving forward from this year.

The crosswalk accurately reflects the courses offered by the department and is updated annually in the fall.

#### **LAB FEES:**

6. Does your department maintain a lab fee account? No.
  - a. If yes, please answer the remaining questions regarding lab budgets.
  - b. If no, please skip the remaining questions regarding lab budgets.
7. Is the lab account balance adequate to cover consumable expenses?
  - a. If no, have fees been reviewed? Why/why not? What is needed to ensure consumables are covered. Discuss. (Should this discussion be used to request a fee increase?)
  - b. If yes, do fees need to be reduced? Discuss.
8. Is the lab account balance adequate for purchasing needed equipment/technology updates?
  - a. If no, do fees need to be increased to help support these? What is needed and what will it cost? How much do the fees need to increase? Discuss. (Should this discussion be used to request a fee increase?)
  - b. If yes, what will be purchased and when?

#### **TECHNOLOGY:**

9. Does your department have the technology available that is needed within courses to prepare students for transfer? Discuss.

Any student can now get a calculator or computer for checkout through the STEM Center or Library. Courses such as statistics often use the same technology used in the field, such as RStudio. A computer classroom with SolidWorks and MATLAB is available for instructors to use in their classrooms.

10. Review your current equipment/technology inventory. Are there equipment/technology purchases that you think that you may need within the next three years. Please discuss equipment/technology

where replacement/update is needed or where technology/equipment is obsolete. Have you planned for these purchases within your lab fee account, if you have one? How do you plan to budget for these purchases?

Whiteboard tables in all classrooms would be very helpful for project based and active learning classrooms.

Ink and paper for poster printer need to be stocked regularly

Manipulatives for MATH 131 and 132 students to use to demonstrate concepts for elementary students

Document cameras are only available in some rooms, not all rooms. These need to run through the computer.

We do not have a lab fee account to purchase these items with. We also have not included basic office and classroom supplies as that is in the department budget request.

**INTERNAL PARTNERSHIPS:**

11. Provide information about how your department is involved in building and/or maintaining specific internal partnerships/relationships. Briefly describe the partnerships you have been working to develop and what the outcome(s) of those partnerships has been. What are you considering or planning to do in the future?

JIT courses have worked with the science programs to ensure students are prepared for science course work

The math department is represented in the STEM Transfer Partnership

The department also works with TRiO to help with student recruitment and activities

The department helps with the STEM Center in the recruitment of tutors and promoting the services offered

The math department works closely with the other departments in the division through regular meetings, budget conversations, and course offerings.

The department is also intentional about being involved in as many different committees on campus as possible.

## 2021-2022 Transfer Program Audit Report SPRING

### **PROGRAM QUALITY – ASSESSMENT and OUTCOMES:**

1. Please review your assessment work over the last three years. Has the assessment work that you have reported resulted in improved student learning or student success? Please share an example of your efforts in this area.

The math department did different assessments each year and with COVID this was unusual for the past few years. However, the department has a schedule of classes to review over a seven year period. We are making changes in the assessment cycle to allow for a better process of assess, adapt, assess to get more useful data in the future.

2. As you have reviewed this work over time, are there elements of this assessment work that you would like to revisit or follow up on in order to learn more in these areas or to “close the loop”? What future steps can you make in your assessment work so that this work has greater meaning to you and your students?

Now that we are back to face-to-face classes and more consistent class offerings in a traditional setting we look forward to collecting more consistent and useful data to inform our teaching practices throughout the department. We also believe the cyclic design of the new assessment process will help greatly in this area over the next few years.

3. Did your department invest in technology or equipment used to improve content delivery or student performance? If so, please describe the purchase and the impact it has had on content and/or student performance.

The department purchased whiteboard tables to allow for interactive active engagement in class activities. More of these classrooms need to be established to extend this practice.

Tablets have been very helpful for online classes to teach concepts and provide valuable feedback to students on online submissions.

4. Please provide examples of any innovative projects, initiatives, or state-of-the-art equipment undertaken in the last year. Please describe and include links to any social media posts and/or press/media coverage, if applicable.

The JIT courses are a new project this year to help students accelerate through pre-college math courses. The department is waiting for data on the success of this program to accelerate students successfully through college level math courses.

The department has begun offering MATH 131/132 courses for students interested in K8 teaching. These courses have been well received by the students.

The pandemic opened up the use of hybrid office hours and they have been very successful in encouraging more students to interact with their instructors in whatever way is most convenient for the student.

Several instructors have started requiring students to attend a few office hours to increase student interaction. This has increased classroom community and closed equity gaps.

5. What was the most successful or noteworthy development with respect to program quality and/or program improvement this year?

With 80% of the faculty now being tenured and 100% are tenure track we can have more stability in the department and start planning for long term improvements in the department and our course offerings.

6. What were the most significant challenges (e.g. funding, enrollment, performance, staff retention or turnover, equity, etc.) encountered in the last year? How could BBCC assist in addressing these challenges?

Enrollment was unexpectedly low this year. Several classes were canceled. Some students have expressed concern that face-to-face classes have fewer options to complete their degree as a result of these cancellations. Campus conversations around increasing enrollments have begun at all levels of the institution and we hope that they can result in success moving forward.

**FACULTY/STAFF PROFESSIONAL DEVELOPMENT:**

7. Please provide brief descriptions and dates of professional development in which you and members of your department have participated in the last year.

PDU lists are available with HR that cover all trainings done by the department with dates including ESCALA, WAMATYC, CEID Reads, Faculty Colloquia, Book club, eLearning Certificates, and others.

8. What was the most successful or noteworthy development with respect to faculty/staff retention and professional development this year?

Two members of the department earning tenure this year was a major step in this direction. In addition, a third member was approved for the second year of the tenure process.

Professional development is always a priority of the department and we hope the admin continues to support us as we grow to improve our teaching and serve our students.

9. Select the methods employed to provide professional development opportunities for faculty/staff. Provide a brief description of each selection.

New Instructor Conference/Boot Camp

Deans Academy

Return-to-Industry

Faculty Peer Mentoring

Professional Development Days

Distance Learning Training

Technology and E-Learning Tools

Data and Assessment Workshops

Subject Matter Conferences

Other

Descriptions of professional development activities are included on PDU forms on file with HR.

**CAREER GUIDANCE:**

10. What was the most successful or noteworthy development with respect to academic guidance and career counseling this year?

The department has advising specialties to help better serve students going into nursing, business, running start, engineering, general DTA, and math.

**K-12 /COMMUNITY PARTNERSHIPS:**

12. Does your department provide opportunity for College in the High School or CTE Dual Credit with area high schools?

a. If yes, list the classes and the schools.

MATH 107 – Ephrata (Warden wants to begin offering)

MATH 141 – Warden & Ephrata

MATH 142 – Warden (not offering this year) & Ephrata

MATH 146 – Ephrata

b. If yes, could this be expanded? How?

Expanding course offerings at Ephrata and Warden. Expanding partnerships to include other area high schools such as Moses Lake, Quincy, and Othello.

c. If no, is this an area that can be developed? How?

13. Provide information about how your department is involved in building and/or maintaining specific external partnerships/relationships with K-12 schools and the communities in our service district. What K-12 partners are you working with and what communities are you working in? What are you considering or planning to do in the future?

College in the high school and running start programs are strong in our department to allow students to earn credits while completing their high school diplomas.

Central University partnership has been established to offer MATH 131/132 for their education students.

Science Olympiad was a great opportunity to work with the local school districts in offering a very successful tournament.

A new grant partnership with Eastern Washington University for engineering transfer degrees.

14. Please describe any outreach events you have participated in as a department. What plans do you have in the future to participate in outreach events with our service district communities?

The department does not actively engage in outreach events at this time. We currently do not have plans to do so. However, we did have many connections formed through science Olympiad competitions.

15. What was the most successful or noteworthy development with respect to high school partnerships?

College in the high school has grown significantly in recent years with the addition of MATH 146 at Ephrata and Warden beginning to offer courses. There are plans to expand Warden's offerings in the near future as well.