MATHEMATICS EDUCATION – GATE B ASSIGNMENTS USING EDTPA

1) Gate B I. Planning for Instruction and Assessment (25 pts.)
   A. LES Lesson Plans. Choose an area of secondary mathematics and create two consecutive LES lesson plans for a Learning Segment using the Purdue Lesson Format (found on Blackboard). At least one of the lesson plans needs to include the use of technology to enhance and support the teaching and learning of mathematics. Follow the planning commentary (located on Blackboard) and rubrics 1-5 (pp.14-18 of the edTPA handbook to guide your planning and justification. All rationale or explanation for plans should be written in the planning commentary. Submit no more than two pages (single-spaced), including prompts, for the commentary. Submit both LES lesson plans in one file.
   B. Instructional Materials. No more than 5 pages of KEY instructional materials per lesson plan; submit materials in one file.
   C. Assessments. Assessments should be a combination of in-class and take-home assessments such as exit tickets and homework. Submit assessments in one file, and label assessments by corresponding lesson (Lesson 1 Assessment, Lesson 2 Assessment).

2) Gate B II. Instructing and Engaging Students in Learning (25 pts.)
   A. You will choose one of your LES lessons from Gate B.I and teach the lesson in class to your peers. Your lesson will be video taped, and you will submit a video clip of your teaching (no more than 15 minutes). You may also put video clips together.
   B. Instruction Commentary. You will provide a commentary of your instruction. No more than 2 pages of commentary (single spaced), including prompts (located on Blackboard) describing evidence seen in the video clip of your teaching practice. If needed, insert no more than 2 additional pages of supporting documentation for the video clips at the end of the commentary (e.g., digital copies of indiscernible materials or transcriptions of inaudible comments). These additional pages do not count towards the commentary page limit noted above.

3) Gate B III. Assessing Student Learning (25 pts.)
   A. Select one assessment you used to evaluate your students developing knowledge and skills from a lesson that you taught or co-taught during your field experience this semester. It should be an assessment that is completed by the whole class. This assessment should also provide opportunities for students to (1) demonstrate conceptual understanding, (2) procedural fluency, AND, (3) mathematical reasoning and/or problem-solving. Submit the original assessment in a single document.
   B. Define and submit the evaluation criteria you will use to analyze student learning as a separate document.
C. Collect and analyze student work form the selected assessment to identify quantitative and qualitative patterns of learning within the class and across learners. Select at least 2 student work samples. At least one of these students must have a specific learning need (IEP, 504 plan, English Language Learner). Submit unedited student copies of sample work in a document.

D. Document and submit the feedback you give to each of the 2 students you select. You can provide feedback on the work itself, or on a separate document.

E. Assessment Commentary. You will reflect on the assessment and feedback given and consider research that support and justify the choices made in your assessment plan. No more than 2 pages (single spaced), including prompts (located on Blackboard) is expected.

Planning Commentary – Gate B.1 (EDCI 425)

In Planning Task 1 (Gate B.1), you will write a commentary, responding to the prompts below. Your commentary should be at least 2 single-spaced pages, including the prompts.

1. Central Focus
   a. Describe the central focus and purpose of the content you will teach in the learning segment.
   b. Given the central focus, describe how the standards and learning objectives within your learning segment address
      a. conceptual understanding,
      b. procedural fluency, AND
      c. mathematical reasoning and/or problem-solving skills.
   c. Explain how your plans build on each other to help students make connections between concepts, computations/procedures, AND mathematical reasoning or problem-solving strategies to build understanding of mathematics.

2. Supporting Students' Mathematics Learning

Respond to prompts below (3a–c). To support your justifications, refer to the instructional materials and lesson plans you have included as part of Planning Task 1. In addition, use principles from research and/or theory to support your justifications.

   a. Justify how your understanding of your students’ prior academic learning; personal, cultural, and community assets; and mathematical dispositions guided your choice or adaptation of learning tasks and materials. Be explicit about the connections between the learning tasks and students’ prior academic learning, their assets, their mathematical dispositions, and research/theory.
   b. Describe and justify why your instructional strategies and planned supports are appropriate for the whole class, individuals, and/or groups of students with specific learning needs. Consider the variety of learners in your class who may require different strategies/support
(e.g., students with IEPs or 504 plans, ELLs, struggling readers, underperforming students or those with gaps in academic knowledge, and/or gifted students).

c. Describe common mathematical preconceptions, errors, or misunderstandings within your central focus and how you will address them.

3. Supporting Mathematics Development Through Language

a. Language Function. Using information about your students’ language assets and needs, identify one language function essential for students to develop conceptual understanding, procedural fluency, and mathematical reasoning or problem-solving skills within your central focus. Listed below are some sample language functions. You may choose one of these or another language function more appropriate for your learning segment:
   a. Compare/Contrast
   b. Justify
   c. Describe
   d. Explain
   e. Prove

b. Identify a key learning task from your plans that provides students with opportunities to practice using the language function identified above. Identify the lesson in which the learning task occurs. (Give lesson day/number.)

4. Monitoring Student Learning

a. Describe how your planned formal and informal assessments will provide direct evidence of students’ conceptual understanding, procedural fluency, AND mathematical reasoning and/or problem-solving skills throughout the learning segment.

b. Explain how the design or adaptation of your planned assessments allows students with specific needs to demonstrate their learning.

Instruction Commentary – Gate B.2 (EDCI 425)

In Instruction Task 2 (Gate B.2), you will write a commentary, responding to the prompts below. Your commentary should be at least 2 single-spaced pages, including the prompts. Refer to examples from the video clip(s) in your responses to the prompts.

1. Which Lesson or lessons are shown in the video clip(s)? Identify the lesson(s) by lesson plan number. (Day 1, Day 2)

2. Promoting a Positive Learning Environment

Refer to scenes in the video clip(s) where you provided a positive learning environment.

   a. How did you demonstrate mutual respect for, rapport with, and responsiveness to students with varied needs and backgrounds, and challenge students to engage in learning?
3. Engaging Students in Learning

a. Explain how your instruction engaged students in developing
   • conceptual understanding,
   • procedural fluency, AND
   • mathematical reasoning and/or problem-solving skills.
b. Describe how your instruction linked students’ prior academic learning and personal, cultural, and/or community assets with new learning.

4. Deepening Student Learning during Instruction

a. Explain how you elicited and built on student responses to promote thinking and develop conceptual understanding, procedural fluency, AND mathematical reasoning and/or problem-solving skills.
b. Explain how you used representations to support students’ understanding and use of mathematical concepts and procedures.

5. Analyzing Teaching

a. What changes would you make to your instruction—for the whole class and/or for students who need greater support or challenge—to better support student learning of the central focus (e.g., missed opportunities)?
b. Why do you think these changes would improve student learning? Support your explanation with evidence of student learning AND principles from theory and/or research.

Assessment Commentary – Gate B.3 (EDCI 425)

In Assessment Task 3 (Gate B.3), you will write a commentary, responding to the prompts below. Your commentary should be at least 2 single-spaced pages, including the prompts.

1. Analyzing Student Learning

a. Identify specific learning objectives measured by the assessment you chose for analysis.
b. Provide a table or chart or narrative that summarizes student learning for your whole class.
c. Use evidence found in the 2 student work samples and the whole class summary to analyze the patterns of learning for the whole class and differences for groups or individual learners relative to
   a. conceptual understanding
   b. procedural fluency, AND
   c. mathematical reasoning and/or problem-solving skills.
**Consider what students understand and do well, and where they continue to struggle (e.g., preconceptions, common errors & struggles, confusions, and/or need for greater challenge).

2. Feedback to Guide Further Learning
Refer to specific evidence of submitted feedback to support your explanations.
   a. Explain how feedback provided to the 2 focus students addresses their individual strengths and needs relative to the learning objectives measured.
   b. Describe how you will support each focus student to understand and use this feedback to further their learning related to learning objectives, within the segment or at a later time.

3. Evidence of Language Understanding and Use

When responding, use concrete examples from the student work samples as evidence.
   a. Explain and provide concrete examples for the extent to which your students were able to use or struggled to use the
      a. selected language function,
      b. vocabulary and/or symbols, AND
      c. mathematical precision, discourse, or syntax to develop content understanding.

4. Using Assessment to Inform Instruction

   a. Based on your analysis of student learning, describe the next steps for instruction to impact student learning:
      a. For the whole class
      b. For the 2 focus students and other individuals/groups with specific needs
   **Consider the variety of learners in your class who may require different support (e.g., students with IEPs or 504 plans, ELLs, struggling readers, underperforming students or those with gaps in academic knowledge, and/or gifted students needing greater support or challenge).
   b. Explain how these next steps follow from your analysis of student learning. Support your explanation with principles from research and/or theory