

# Diverging Strand Analysis

**Due:** 2022-11-22 @ 2200**Weight:** 5%**Submitter:** Individual

## Strand Assignments in Context

For each of the three “Strands” in Praxis I, you will write an analysis about a particular aspect of the activity.<sup>1</sup> Each analysis challenges you to develop your self-awareness about how you practice engineering design, communication, and teamwork. Your ability to analyze and reflect on your experience enables you to gain more conscious control of your learning and practice. More conscious control of your practice enables you to make informed choices about how you approach engineering design activities, communicate, and use the tools and models that are introduced throughout the course.

Each Strand focuses on one aspect of the design process and the activities associated with it. By putting the three Strands together, you will have a basis for your future design work, and more practically for one of your Praxis II assignments, your handbook. The Strand analyses also provide a record of your activities and growth.

## Approaching the Assignment

In lecture and studio, we have encouraged you to pay attention to your team work and the process. We encouraged you to gather evidence of your process, as you will need it to support the claims you make in your strand analysis.

Begin by considering how you and your team are working together on the strand. Observe how your team uses your team objectives (and associated metrics), and any diverging tools, models, or concepts in your diverging practice.

Once you have observed yourself and have a sense of what your actions are within the team, select **one** (1) of the two foci below to write about:

- how your individual actions helped leverage team member perspectives to expand your pool of design ideas, or
- how a diverging tool other than brainstorming enabled you to contribute novel ideas to your team’s idea generation (divergence)

Selecting a focus from the two options above will enable you to determine what specific action to analyze and write about. We want you to become aware of your own actions and the influence they have on your team and your team’s design work.

## Writing the Assignment

1. Choose the “what.” Choose one action that **you** took specific to the diverging process and describe that action briefly. Make sure you are discussing an action that fits into **one** of the two foci above, and that you provide evidence from your documentation of the team’s activities.

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<sup>1</sup> The third strand analysis will be incorporated into the final exam.

2. Analyze the “so what.” Analyze your action to determine how it impacted your team activity. What were the outcomes or consequences of your actions on the way your team worked?
3. Consider the “now what.” As you understand your actions and their implications on the team, briefly explain how you intend to maintain, change, or improve your actions in the team moving forward.

## Assignment Stakeholders

- You, individually, an aspiring engineer, who will practice engineering design with different teams, in different contexts and in pursuit of differing goals, and thus need to become aware of how you practice engineering design and communicate that practice.
- Your Praxis Team, who are interested in your development as a team member so as to support them in creating a high quality team and designs.
- Your Studio Teaching Team, who want to understand what you are learning and support your increased self-awareness and intentionality when practicing design and teamwork.
- Your Strand Analysis Assessor, who has about twenty ( $\leq 20$ ) minutes to evaluate your submission and needs to be able to understand your Analysis.

## Requirements

The key words “must”, “must not”, “required”, “should”, “should not”, or “recommended”, in this and following sections are to be interpreted as described in RFC 2119.

## Objectives

1. Analyze and reflect on your experiences, learning, and understanding of diverging in an engineering design process in terms of:
  - how you understand/interpret the Strand focus you have selected
  - what specific actions you took to achieve the focus
  - insights you have gained about either the behaviours, tools, models, or concepts you used to achieve the focus
  - assessment of the implications of **your** actions on your team’s diverging work
2. Document behaviours, tools, models, or concepts you used to support your diverging work.
3. Demonstrate clear, concise engineering communication.

## Constraints

### Your Strand Analysis

1. **Must** address one (1) of the stated foci for the Strand being analyzed
2. **Must** state which of the foci it is addressing at the start of your document.
3. **Must** be between 500 and 700 words, and not exceed two (2) pages integrated text and graphics, exclusive of references, graphical elements, or appendices.
4. **Must** include the student's name and total word count at the top of the page.
5. **Should** be formatted with 11-point font, 1.1 spacing, and one-inch margins on standard letter-sized paper.
6. **Must** be submitted as a single PDF file through Quercus to the correct assignment. If you select Focus 1, you **must** submit it in the Focus 1 Submission Space. If you select Focus 2, you **must** submit it in the Focus 2 Submission Space.
7. **Must** have a file name that follows the Praxis naming convention:  
    <UTORID>-SA1.pdf  
    e.g. irishrob-SA1.pdf

## Characteristics of Evaluation

These characteristics describe the attributes that will be evaluated. For the full metrics consult the Framing Strand Independent Assessment Tool. That Tool places these characteristics alongside descriptions of levels of achievement that you can use to independently assess your work. For all characteristics, the criteria are “more”, “higher”, or “greater”.

Note: These characteristics may not be weighted equally.

1. Quality of introduction to frame the Strand analysis
2. Quality of analysis of the Strand focus
3. Integration of evidence of actions with analysis
4. Quality of assessment of individual actions to achieve the Strand focus
5. Clarity of future action based on analysis
6. Clarity of written and visual expression