Background: Duke Kunshan University (DKU) is an interdisciplinary institution that grants dual undergraduate degrees, an MOE Chinese degree and a degree from Duke University in Durham, United States. The principal structure of DKU majors is robustly interdisciplinary. No student confines their study to a single discipline (for example, biology or economics). Instead, all students engage in broad inquiry related to a subject or question (for example, political economy or global health) and take a wide variety of courses related to that area (for example, in public policy, history, ethics, or economics). As a result, our graduates are prepared to engage in a wide variety of inquiries using multiple methodologies to address complex issues that require interdisciplinary approaches.

This has implications for our vision and expectations of undergraduate theses and design projects, which reflect this broad interdisciplinary training. At DKU, every student completes a two-year project known as signature work which consists of multiple interconnected parts including thematic courses, experiential learning, capstones, and a final product. It seeks to integrate students' interdisciplinary educational experience and culminates in the creation of a product in a scholarly, creative, or applied nature in leu of an undergraduate thesis or design required by JED. Because DKU encourages students to cultivate their independence and creativity as one of its institutional student learning outcomes, the student-led signature work projects often reflect students' own particular interdisciplinary interests and training. In addition, signature work has an intensive emphasis on problem-solving and skill-development which is much needed for any interdisciplinary inquiry; thus, students' final products are evidence of transferrable skills that students have acquired and demonstrated through the 2-year program, rather than content knowledge narrowly defined by disciplinary training.

In sum, while the Chinese major declared with any given student might be construed narrowly, the experience of our students is much broader—and intentionally so. This is a distinctive feature of our curriculum, and this distinctiveness results in broadly interdisciplinary submissions from our graduates' submitting theses or design projects. We have designed this to prepare our students for a wide variety of graduate programs in China and the West, where interdisciplinary training is a competitive advantage.

THESIS TITLE THAT EXTENDS OVER ONE LINE GOES IN INVERTED PYRAMID FORM

by

First_Name Last_Name

Signature Work Product, in partial fulfillment of the Duke Kunshan University Undergraduate Degree Program

January 29, 2022

Signature Work Program Duke Kunshan University

PPROVALS	
Tentor: John Zou, Division of Natural and Applied Sciences	_
o-Mentor: John Zou, Division of Natural and Applied Sciences (Please delete this section if you do	— not have a co-

mentor)

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ABSTRACT

Abstract (English): 150 – 200 words. An abstract is a brief statement of the problem or the purpose of the research. It should indicate the theoretical work or experimental plan used, summarize principal findings of the research, and point out major c onclusions. Appropriate safety information should be included when applicable. This should be the section you write last to be sure that it accurately reflects the content of the document.

ACKNOWLEDGEMENTS

Individuals and organizations who helped with the research project and provided financing are thanked in a paragraph of the thesis. Do not include individual titles in the acknowledgments. However, it is appropriate to state grant numbers and sponsors. Examples would like SELF, SRS, SW Grants, etc.

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3.1	Parameters for the optimization of the principal component analysis for olive	
	oil adulteration	

INTRODUCTION

This section includes a clear statement of the problem and the reasons for studying it. Provide a detailed yet concise background discussion of the problem and the significance, scope, and limits of the work. Outline what has been done previously by citing truly pertinent literature but do not include a general survey of semi-relevant literature. State how your work differs from earlier work in the field and demonstrate the continuity from the previous work to your own.

MATERIAL AND METHODS

This section is obviously discipline specific so use the nomenclature that is common for your discipline. However, this section should provide sufficient detail about the materials and the methods used so that other experienced workers can repeat the experiment and obtain comparable results. Cite the appropriate literature when using a standard method or protocol and give only the details needed. Identify the materials used in the research. For example, computer systems used, mathematical theorems exploited, etc.; give information on the purity of all chemicals and reagents employed in the research; include the chemical/biological names of all compounds and chemical formulas of substances that are new or uncommon. Use standard systematic nomenclature to unambiguously define well-established compounds, processes, equipment, etc.

RESULTS

Summarize the data collected in this section, and their statistical treatment. Include only relevant data, but give sufficient detail to justify the conclusions. It is appropriate in this section to use equations, figures, and tables to display your data. Extensive, but relevant data, should be reserved for an appendix where it is identified as supporting information.

The table or figure must follow as closely as possible after the paragraph in which it is referenced. Titles/captions should be kept brief.

3.1 Examples

Here is some inline math, $x^2 > 1$, and some display math

$$\int_0^1 x^2 \, dx \tag{3.1}$$

And this is how to cite an article [2] or a book [1].

Table 3.1: Parameters for the optimization of the principal component analysis for olive oil adulteration.



Figure 3.1: The notorious BTC (Brandon The Cat).

DISCUSSION

The discussion section is where you interpret and compare the results. The objective is to point out the features and limitations of the work. Relate your results to current knowledge in the field and to the original purpose for undertaking the project.

CONCLUSIONS

This section is written to put the interpretation of the results into the context of the original problem. Do not repeat the discussion points or include irrelevant material. The conclusion should be based on the evidence presented.

REFERENCES

Many bibliographic styles are acceptable for publications in the natural sciences. This template uses a numeric style defined in biblatex and that is common in Physics, Mathematics, and Computer Science papers.

- [1] Sheldon Axler. *Measure, Integration & Real Analysis*. Springer, 2020. DOI: 10.1007/978-3-03 0-33143-6.
- [2] Han Zhang et al. "Learning Hamiltonian dynamics with reservoir computing". In: *Phys. Rev. E* 104 (2 2021), p. 024205. DOI: 10.1103/PhysRevE.104.024205.

Appendix A

ADDITIONAL MATERIAL

This template can be viewed on Overleaf at https://www.overleaf.com/read/hxjcgtkhjqcd. If you have an Overleaf account (either free or paid) you can copy this template to start a new Overleaf project. If you do not want an Overleaf account you can install TeX on your computer and download the template files from Overleaf.