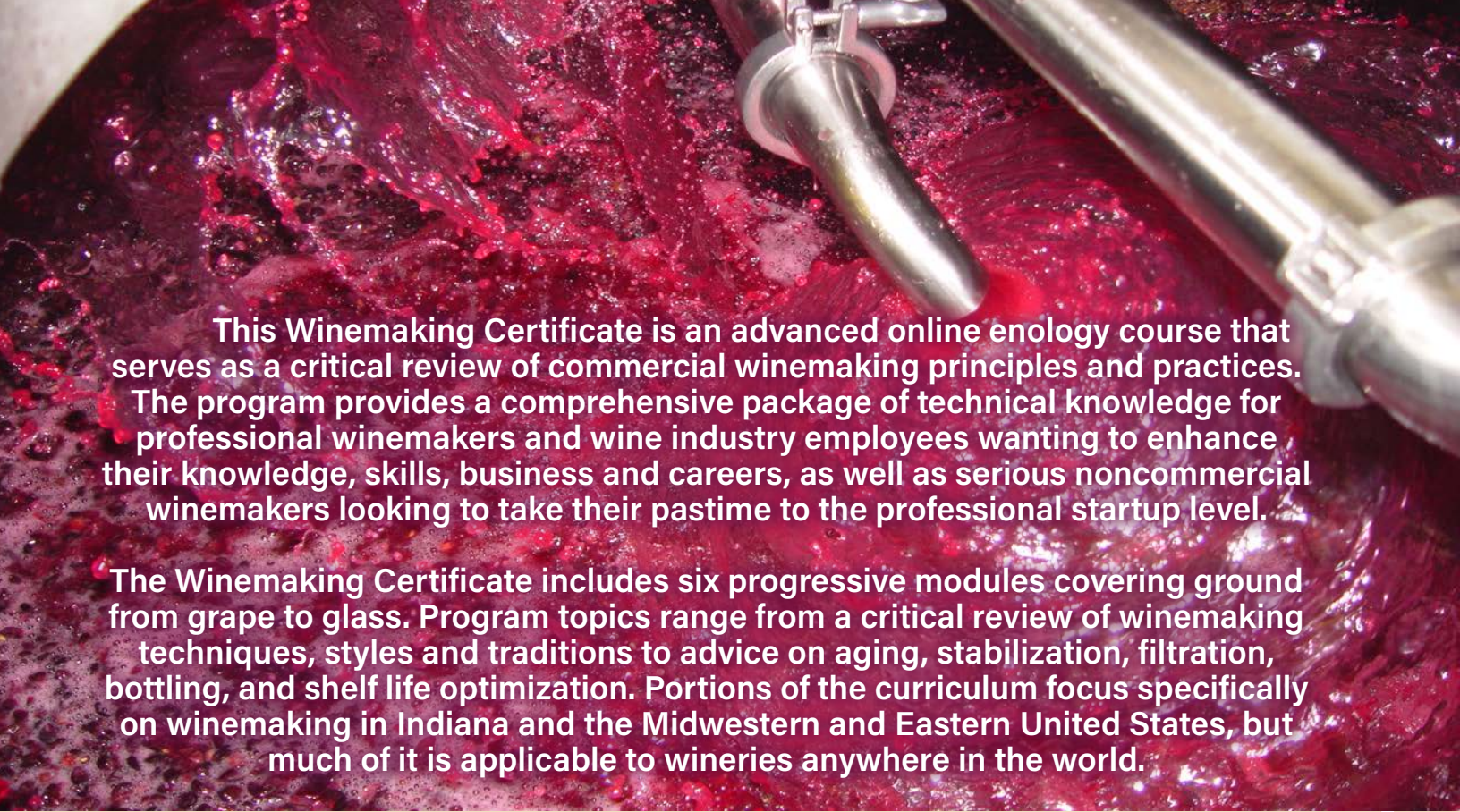




PURDUE
UNIVERSITY®

Winemaking Certificate

Principles and Practices



This Winemaking Certificate is an advanced online enology course that serves as a critical review of commercial winemaking principles and practices. The program provides a comprehensive package of technical knowledge for professional winemakers and wine industry employees wanting to enhance their knowledge, skills, business and careers, as well as serious noncommercial winemakers looking to take their pastime to the professional startup level.

The Winemaking Certificate includes six progressive modules covering ground from grape to glass. Program topics range from a critical review of winemaking techniques, styles and traditions to advice on aging, stabilization, filtration, bottling, and shelf life optimization. Portions of the curriculum focus specifically on winemaking in Indiana and the Midwestern and Eastern United States, but much of it is applicable to wineries anywhere in the world.

Winemaking Principles

Recap of techniques, style, traditions

The purpose of this introductory module is to reiterate the fundamental ways and challenges of creating basic wine styles. It is intended to get all students, independent of their own experience, on the same technical page as we prepare to talk about more advanced concepts and practices in subsequent modules.

Winemaking Issues

Best practices

The purpose of the second module is to discuss advanced enology concepts to assure the practical sustainability of a commercial winemaking operation. From the proper technical design of a small winery to pertinent economic considerations, we will review major applied aspects of running a successful wine business.

Wine Stability

Needs and excesses

The purpose of the third module is to review the winemaker's abilities to adjust and assure the desired composition and quality of a finished wine. We will discuss the major stabilization and fining techniques to guarantee an intelligent, low-input approach to modern commercial-scale winemaking.



Filtration, bottling, and closures

Practical considerations

The purpose of the fourth module is to assure that a well-crafted wine's quality is maintained throughout the final steps of processing, and beyond. A thoroughly considered filtration and bottling process lets the winemaker sleep well at night as it guarantees the wine consumer's satisfaction after opening a bottle.

Wine quality, aging and shelf life

Factors to consider

The purpose of the fifth module is to look at different aspects of a fine wine's success in the marketplace. Understanding the global wine industry supply chain allows winemakers to optimize their wines' healthfulness, complexity, aging potential, and value.

Terror and climate change

Concepts and winemaking consideration

The purpose of the sixth and final module is to contemplate the future of winegrowing and winemaking as we know it. This will prepare the winemaker for the inevitable adjustments to production traditions due to global warming as well as constantly changing consumer preferences.





Program at a glance

Each module includes video lectures and supplemental materials, as well as interaction with the instructor and other students. Dr. Butzke will be available to consult on technical questions, even after participants complete the course.

MODALITY: Self-paced
ACCESS: 1 year
TUITION: In-state: \$999
Out-of-state: \$1,250

WHO SHOULD ENROLL

Those in the wine business, whether entry-level winery workers or seasoned winemakers along with serious noncommercial winemakers.

It is advised that participants have prior or concurrent winemaking experience.

Learn more

<http://bit.ly/PurdueWinemaking>



Meet your professor

CHRISTIAN BUTZKE

*Professor of Enology, Department of Food Sciences,
including Wine Appreciation Online*

Dr. Butzke is a professor of enology (the science of wine and winemaking), a past-president of the American Society of Enology and Viticulture and an award-winning commercial winemaker and wine competition judge. He's the editor of the technical book "Winemaking Problems Solved" for commercial winemakers and author of the popular textbook "Wine Appreciation."



Purdue Winemaking Certificate

- A Critical Review Of Commercial Winemaking Principles And Practices
Instructor: Dr. Christian E. BUTZKE - Professor of Enology

WINEMAKING PRINCIPLES – RECAP OF TECHNIQUES, STYLES, TRADITIONS

1. Introduction to the Wine Professor
2. Introduction to the Global Wine Industry
3. Introduction to the Wine Profession
4. An International Winemaking Perspective: Wines of Italy
5. White vs. Red Winemaking Techniques
6. Yeast and Bacteria Considerations
7. Wood and Wine
8. Rosé Winemaking
9. Carbonic Maceration
10. Sparkling Wine Making
11. Sweet Wine Making
12. Dessert Winemaking

WINEMAKING ISSUES – BEST PRACTICES

13. Positive Cashflow Winemaking
14. Winemaking Trends
15. Winery Design Basics
16. Winery Time Management
17. Winery Sanitation
18. Winery Safety
19. New Winemaking Technology ?

WINE STABILITY - NEEDS AND EXCESSES

20. Off-Odors in Wine
21. Enzymes in Winemaking
22. Wine Acidity Management
23. Wine Cold Stabilization
24. Fining Agents

FILTRATION, BOTTLING, AND CLOSURES - PRACTICAL CONSIDERATIONS

25. Wine Filtration
26. Getting Ready for Bottling
27. Corks and Closures

WINE QUALITY, AGING, AND SHELF-LIFE – FACTORS TO CONSIDER

28. Winery Quality Control Basics
29. Wine Lab Quality Systems
30. Winemaking Math
31. The Shelf-Life of Wine?
32. Wine Shipping and Storage
33. Savory Aromas in Wine
34. Wine Nutrition and Health

REGIONAL TYPICITY, TERROIR AND CLIMATE CHANGE – CONCEPTS AND WINEMAKING CONSIDERATIONS

35. Midwestern/Eastern Winemaking Issues: Winemaking with Hybrid Grapes
36. Midwestern/Eastern Winemaking Issues: Blending
37. Midwestern/Eastern Winemaking Issues: Traminette Winemaking
38. Winemaking and Global Warming
39. Winegrowing and Global Warming



Purdue Winemaking Certificate

The Purdue Winemaking Certificate is an advanced online enology course that serves as a succinct critical review of commercial winemaking principles and practices, taught by a former president of the American Society for Enology and Viticulture.

Instructor

The teacher, Professor Christian Butzke (butzke@purdue.edu), is one of the preeminent enologists in the United States, who brings his extensive experience as a wine scientist, judge, educator, and award-winning commercial winemaker to the classroom. In this course, he is sharing with his students his almost thirty years of practice and insights from working in the American wine industry on the West Coast, in the Midwest, and on the East Coast. Even after students gain their certificate, they will be able to rely on Dr. Butzke's lifelong advice as an independent consultant, and his mentorship. www.wineprofessor.org

Purpose

The intent of this winemaking certification is to "skill up" the existing and potential workforce of the U.S. wine industry by providing an affordable and comprehensive course that complements the students' essential work experience in form of industry employment, and national and international internships.

Pre-Requisites

The Purdue Winemaking Certificate program is a course that requires prior or concurrent wine industry work experience. It is not a class that teaches you how to make wine but a class that teaches one how to make better wine and improve the winery's bottom line. Like swimming or riding a bicycle, winemaking is not inherently learned by reading a book or taking an online class. Winemaking is neither an art nor a science, but a craft that requires very specific hands-on skills, technical know-how and practical experience, as well as personal passion and intuition. While people have made wine based on experiential learning for thousands of years, only a deep understanding of the scientific principles behind the commercial practices guarantees a successful and sustainable business and career in today's competitive global wine industry.

Enology, the science of wine, is a multi-disciplinary field that comprises chemistry, physics, microbiology, engineering, and plant biology. Consequently, a solid general education in the STEM disciplines is the best base to take full advantage of the advanced class content. However, there is no specific educational pre-requisite to enter the program, and understanding of the topics and problems addressed can be supplemented by additional readings or exchanges with

the other students or the instructor. At the very least, the course will give the students a better idea where their enological knowledge stands, and where it needs additional coursework.

Audience

From a "cellar rat" to a director of winemaking, the class accommodates different skill and experience levels, and will bring new knowledge and insights to all participant, or at least reassurance and a refreshing of the existing, even if they have taken other winemaking classes already.

Course Structure

The course features three dozen video lectures that are organized in six progressive modules which can be taken at the student's own pace. If taken at one lecture a day, a working professional can easily complete the course within a six-week timeframe. Accommodating the seasonal work environment of the wine industry, students have a full year to finish the course, and qualify for their certificate.

Interactivity

Between modules, students are required to reflect on the content and share questions, suggestions, and their own personal experiences with the instructor, and - anonymously - with other students.

Further Readings

Additional content is made available complimentary in form of Extension publications that will help the students to achieve a lasting comprehension of most if not all aspects of modern winemaking. Dr. Butzke's hands-on book "Winemaking Problems Solved" is available for purchase as a hardcover or e-book:

<https://www.elsevier.com/books/winemaking-problems-solved/butzke/978-1-84569-475-3>

Final Exam and Learning Outcomes

A final 100-question exam will assure that the information provided throughout the six modules was not just memorized and understood, but can be applied to analyze and evaluate the student's local work environment, and create new opportunities to enhance the sustainability and competitiveness of their wine business, and their developing career in the wine industry.

Graduates of the Purdue Winemaking Certificate will be able to:

- Distinguish the underlying production principles and challenges to create all basic wine styles
- Critically review all major technical aspects of designing and running a successful wine business
- Improve their abilities to adjust and assure the desired composition, quality and stability of all wines
- Assure that their well-crafted wine's inherent quality is maintained throughout all final processing steps at the winery

- Maximize their wines' complexity, healthfulness, aging potential, value and shelf-life by better understanding the global wine industry supply chain
- Be prepared for the inevitable adjustments to production traditions due to climate change as much as changing consumer preferences

Module Overview

1. WINEMAKING PRINCIPLES – RECAP OF TECHNIQUES, STYLES, TRADITIONS

The purpose of this first, introductory module is to reiterate the fundamental ways and challenges of creating basic wine styles. It is intended get all students, independent of their own experience, on the same technical page as we prepare to talk about more advanced concepts and practices in subsequent modules.

2. WINEMAKING ISSUES – BEST PRACTICES

The purpose of the second module is to discuss advanced enology concepts to assure the practical sustainability of a commercial winemaking operation. From the proper technical design of a small winery to pertinent economic considerations, we will review major applied aspects of running a successful wine business.

3. WINE STABILITY - NEEDS AND EXCESSES

The purpose of the third module is to review the winemaker's abilities to adjust and assure the desired composition and quality of a finished wine. We will discuss the major stabilization and fining techniques to guarantee an intelligent, low-input approach to modern commercial-scale winemaking.

4. FILTRATION, BOTTLING, AND CLOSURES - PRACTICAL CONSIDERATIONS

The purpose of the fourth module is to assure that a well-crafted wine's quality is maintained throughout the final steps of processing, and beyond. A well-thoughtout filtration and bottling process lets the winemaker sleep well at night as it guarantees the wine consumer's satisfaction after opening a bottle.

5. WINE QUALITY, AGING, AND SHELF-LIFE – FACTORS TO CONSIDER

The purpose of the fifth module is to look at different aspects of a fine wine's success in the market place. Understanding the global wine industry supply chain allows winemakers to optimize their wines' healthfulness, complexity, aging potential, and value.

6. TERROIR AND CLIMATE CHANGE – CONCEPTS AND WINEMAKING CONSIDERATIONS

The purpose of the sixth and final module is to contemplate the future of winegrowing and winemaking as we know it. This will prepare the winemaker for the inevitable adjustments to production traditions due to global warming as much as constantly changing consumer preferences.

TOPICS IN ENOLOGY (OPTIONAL COURSE)

SCHEDULE

| | | | | |
|------------|----------|-------|-------|----|
| 09/05/2022 | Monday | 16:30 | 18:30 | 6 |
| 10/05/2022 | Tuesday | 10:30 | 13:30 | 23 |
| 12/05/2022 | Thursday | 14:30 | 17:30 | 6 |
| 13/05/2022 | Friday | 10:30 | 13:30 | 6 |
| 16/05/2022 | Monday | 16:30 | 18:30 | 6 |
| 17/05/2022 | Tuesday | 10:30 | 13:30 | 23 |
| 19/05/2022 | Thursday | 14:30 | 17:30 | 6 |
| 20/05/2022 | Friday | 10:30 | 13:30 | 6 |
| 23/05/2022 | Monday | 16:30 | 18:30 | 6 |
| 24/05/2022 | Tuesday | 10:30 | 13:30 | 23 |
| 26/05/2022 | Thursday | 14:30 | 17:30 | 6 |
| 27/05/2022 | Friday | 10:30 | 13:30 | 6 |
| 30/05/2022 | Monday | 16:30 | 18:30 | 6 |