

Roger Williams University
CORE 475: Beer Culture (3 credits)

Faculty-Led Study Abroad (Germany-Belgium-England)
May 2021 (16-days/14 nights + pre- and post-instruction)



Dr. Cliff Timpson ctimpson@rwu.edu
(401-254-3297) Office: MNS 228

Dr. Robert Cole rcole@rwu.edu
(401-254-3149) Office: GHH 331

REQUIRED TEXTS

- Garrett, Jonny & Brad Evans (2016). *Beer School: A Crash Course in Craft Beer*. Mango Media, Inc. ISBN-13: 978-1633533684. Paperback \$12.20 Kindle \$5.58.

These materials will be provided by the course instructors at no cost:

- *2015 Beer Judge Certification Program Style Guidelines*.
downloadable as a .pdf available at: <http://www.bjcp.org/stylecenter.php>.
- Reading Packet, downloadable from Bridges as .pdf.

RECOMMENDED TEXTS

- Palmer, John (2006). *How to Brew*. Brewers Publications; 4th edition. ISBN-13: 978-0937381885. Paper = \$14 or Kindle = \$10.
- Moser, Randy (2009). *Tasting Beer: An Insider's Guide to the World's Greatest Drink*. Storey Publishing, LLC. ISBN-13: 978-1603420891. Paper = \$11 or Kindle = \$10.
- Dornbusch, Horst (1998). *Prost!: The Story of German Beer*. Brewers Publications. ISBN-13: 978-1938469350. Paper = \$17 or Kindle = \$10.
- Faltermeier, Ernst & Fachverlag, Hans Carl (2016). *The Beer Monopoly: How brewers bought and built for world domination*. ASIN: B01N91S8Q4. Kindle=\$31.99.

PREREQUISITES

- Students must be 21 years of age or older on the first day of instruction
- Students must have completed WTNG 102 or its equivalent & CORE 100s
- Students must be in good academic standing
- Students must have a satisfactory judicial history

COURSE PURPOSE AND OBJECTIVES

More than 4,000 years before the Common Era, Babylonians were devising recipes for making beer. Since then, evidence exists that the fermenting of grains has occurred on every continent. From Ancient Egyptians to Asiatic peoples, from Assyrian to Incan cultures, from southern Africa to northern Europe, beer has served as nourishment, social lubricant, currency, product of trade, and a source of tax revenue.

Through visits to world-famous breweries, interaction with professional brewers, trips to farm and field harvesting sites, historical consumption locations and museums, along with hands-on lab activities to produce and sample beers, this course examines four specific aspects of this essential product: **1) The Chemistry of Beer** leads students to understand the role various ingredients play in the makeup of beer varieties. They will understand the chemical process by which grains are converted into alcohol, how hops bitter the liquid, and the importance of yeast in the fermentation stage. **2) The Craft of Brewing Beer** will provide a hands-on introduction to the equipment and techniques required to produce beer from selecting a style to developing a grain bill, performing mash and hop addition calculations, through final bottling. A command of the range of the world's beer styles will also be gained. **3) The Cultural Role of Beer** will review the deep role beer has played in the histories of many cultures, will examine the prominence of beer in art and literature, and will engender an understanding of the British and Germano-Belgian sensibilities in which beer is inseparable from the cultural identity. Finally, **4) The Industry of Beer Production** will consider the commercial monetization of beer, its large-scale production and marketing, the recent craft and micro-brewery movements, as well as job opportunities in the field.



Düsseldorf, Germany, Brussels, Belgium and London, England serve as hub points for site visits and activities (red). An independent study day (w/\$100 housing allowance) provides students the opportunity for overnight travel to Paris, Amsterdam, or other city, at their own expense (blue). A map of the trip is viewable here: <https://tinyurl.com/RWUCORE475-Map>

COURSE OUTCOMES

The primary goals of this course are to help students acquire an understanding of, and appreciation for, beer as both a process and product. More specifically, the course is designed to provide a set of learning outcomes in which the students will be able to:

- diagram and understand the basic chemical processes by which raw materials yield beer as a consumable, finished product.
- build a recipe for a beer that matches a standard style; manage the equipment to brew that recipe; and produce their own product.
- gain a working vocabulary for tasting and qualify beer by the accepted judging categories of Aroma, Appearance, Flavor, Mouthfeel, and Overall Impression.
- recount the world history of brewing and beer consumption over time.
- compare the cultural, moral, and legal attitude toward beer between the United States and that of other countries, with a focus on Germany, Belgium, and England.
- think critically about the commercialization and mass production of beer, in contrast to its origins as a locally crafted product, as well as the resurgence to reclaim small-scale production approaches.

COURSE OUTLINE

The following topics are covered in this course, and will include some or all of these elements:

- **The Chemistry of Beer**
 - Agricultural Components of Beer, Including Barley and Hop Varieties
 - Enzymatic Conversion from Starch to Sugars to Ethyl Alcohol or Ethanol
 - Zymurgy and Fermentation of Beer Yeast Strains
 - Attenuation and Flocculation of Yeast
 - Bitterness and IBU Scales
 - Alcohol by Weight/Alcohol by Volume Calculations
 - Esters, Diacetyl and Phenolics
 - Conditioning
 - Shelf life
- **The Craft of Brewing Beer**
 - Beer Styles & Cicerone Basics
 - Hands-on, Applied Brewing Techniques
 - Brewing Equipment
 - Sanitation
 - Developing Beer Recipes and Grain Bills
 - Reinheitsgebot “Purity Law”
 - Mashing & Using Malt Extracts
 - Sparging
 - Wort Production
 - Hops and Dry-hopping
 - Measuring Specific and Final Gravities
 - Pitching Yeast
 - Bottling/Kegging

- **The Cultural Role of Beer**
 - The History of Beer Brewing and Consumption
 - Beer in Art and Literature
 - Aesthetics and Architecture of Historical Pubs and Breweries
 - Beer in a Social/Cultural Context
 - British Pubs as Social and Political Civic Hubs
 - Differing Consumption Levels and Abuse
 - Government Legislation and Regulation of Beer Production/Consumption

- **The Industry of Beer Production**
 - Brewing as a Major Industry
 - Scaling up the Production, Canning, Bottling, and Kegging
 - Marketing
 - Product Distribution, Including Legal Regulations
 - The Rebirth of Craft and Micro Brewing
 - The Consolidation of Macro Breweries and Brands
 - Jobs in Brewing



COURSE REQUIREMENTS

1. *Trip Journal*. Students will keep a journal, to be turned in shortly after returning from abroad, in which they record their reactions and observations to the lectures, site visits, social interactions and cultural immersion they experience. Daily entries (10 in total) should typically be 2 type-written pages in length. In the entries, the students should seek to describe, analyze, and critique what they have observed. The multimedia journals will include embedded photographs, videos, and other graphics in addition to a substantial use of the written word. Framing prompts will be provided to the students for each day's activities to train their ethnographic gaze toward the features of the experience that move them toward the course outcomes.
2. *Research Paper*. Students will develop a final paper in which they analyze and critique some aspect of the current beer industry. The assignment, built from a list of provided topics or prompts, calls for students to synthesize what they have discovered about intentional human

interaction with biological raw materials to craft a product (beer) that recovers, sustains, advances, or colonizes traditional beer culture and production practices. In their analytic and synthetic work, they will be asked to draw parallels between the craft beer renaissance and other food-based artisanal movements such as “farm-to-fork,” “free-range,” small-scale dairy, grain, confectionary and other production/marketing approaches.

3. *Quizzes*. Completed in class or assigned as homework, the quizzes explore questions about course concepts through application and analysis.
4. *Attendance/Participation*. Besides your presence, you should offer thoughtful, original, coherent responses to discussion questions and through your interactions with those providing site visit information and guidance.

Assignments	Total Points	Percentage
Journal Submission (10 entries @ 50 points)	500	50%
Term Paper	300	30%
Quizzes	100	10%
Participation	100	10%
Total	1000	100%

Grades will be based on a scale where (93%--100% = A) (90%--92% = A-) (87%--89% = B+) (83%--86% = B) (80%--82% = B-) (77%--79% = C+) (73%--76% = C) (70%--72% = C-) (67%--69% = D+) (63%--66% = D) (60%--62% = D-) (0%--59% = F). At any time you can determine your approximate letter grade by dividing the number of points you have earned to date by the number of points possible to date.

GENERAL COURSE POLICIES

- **Attendance:** Because this course involves laboratory projects and a study abroad component, you are expected to participate in all course related, organized events and activities.
- **Late/Make Up Work:** In general, no late work will be allowed. In the event of extreme personal circumstances, makeup work might be accepted for partial credit.
- **Tutoring:** Tutorial Support Services (TSS), located on the second floor of the University Library within the Center for Academic Development, provides peer and faculty tutoring at no charge for all RWU students. The Math, Writing, and Science Centers offer assistance Monday – Thursday 9 am – 8 pm; Friday 9 am – 3 pm; Sunday 2 pm – 8 pm.
- **Accommodations:** Any student who feels s/he may need an accommodation based on the impact of a disability should first contact the Student Accessibility Services office to coordinate reasonable accommodations, *before enrolling in this travel intensive course*. The SAS office will provide documented/registered students with the specific information needed to begin the accommodation process. SAS is located on the second floor of the Main University Library in the Center for Academic Development and is open from 8:00 am to 5:00 pm Monday through Friday. The contact number is 401-254-3841.

ADDITIONAL COURSE POLICIES

Academic honesty is the cornerstone of a university-level education. Plagiarism is generally defined as the act of using someone else's exact ideas, words, or organization without giving them due credit. Any student caught plagiarizing material will be prosecuted to the full extent possible under the University's guidelines. To avoid any appearance of ethical misconduct, intentional or otherwise, use footnotes and endnotes to cite sources in any written or spoken work you do in this course, or any other course for that matter. In your writing and speaking you must clearly distinguish your ideas and words from the work of others. Under no circumstances should you use work from another source and claim it as your own. Please see your university catalogue and student handbook if you have any questions about the college policy on cheating/plagiarism. <http://rwu.edu/academics/academic-affairs/academic-standards>.

This course consists of a combination of lecture, discussion, laboratory and field site activities. You are encouraged to ask questions, speak about what is on your mind, and to actively engage the class material. In other words, we want to know what you think and how you interpret the material we cover.

Each of us must work to make our learning spaces a friendly, safe, non-threatening environment. There will be no tolerance for any words or actions that in any way demean, devalue, dismiss, or dehumanize other people for who they are or what their experiences have been. Every person is to be accorded the respect that any thinking, feeling human being is due.

For additional course policies and considerations, refer to the *Spiegel Center Study Abroad Handbook*.

SAFETY AND BEHAVIORAL EXPECTATIONS

Safety Requirements

- While abroad, no student may go out without another member of the RWU group, unless given written permission from the course instructors. Students must travel in at least groups of two.
- Students are not allowed to invite anyone to their lodgings.
- Students are not allowed to travel in cars without permission of instructors.
- Students are not allowed to leave the immediate vicinity of the group location without prior (written/electronic) consent of the course instructor(s).
- While abroad, students must remember that they are representing RWU. When out on the town, students are expected to be polite and be respectful of the local residents and their culture.
- While abroad, students must report to faculty if they feel ill so we can make appropriate medical arrangements.
- At all times, students must carry the ID/Information Card associated with this study abroad program. This card contains essential information on what to do in the unlikely event of an emergency, the addresses and phone numbers of the residences/hotels, the faculty cell phone numbers, and the email/phone number of the Spiegel Center at RWU.

Behavioral Expectations

- While abroad, you should not draw undue attention to yourself or the group in such a way that clearly identifies you as a foreign visitor.
- At all times, keep in mind that you are an ambassador for Roger Williams University and the impression you leave is expected to be a good one. You are a guest in another country and as such should be respectful of the people, places, and culture.
- This is a course intended to *educate* you about beer, brewing, and the cultural use of alcohol. As such, alcohol is to be consumed in a moderated, responsible manner.

CORE 475: BEER CULTURE - ITINERARY (*Times/Dates TENTATIVE as of 2020-09-23*)*

PRE-TRIP Labs (Bristol) May 2021 days TBD

- Lab #1 Brewing (5 hours in Bristol)
- Lab #2 Process (5 hours in Bristol)
 - Brewing process overview, ingredients, equipment, style sampling and identification, product contamination

DAY 1 Monday 24 May 2021

Travel Day

- Shuttle to Logan Airport leaves from RWU Global Heritage Hall at **TBD:00pm**.
- Early evening (5:45pm) departure from Boston to Düsseldorf, Germany (**be at Logan Terminal C by TBD:00pm**)

DAY 2 Tuesday 25 May 2021

Late morning arrival in Düsseldorf. Hotel check-in: Wyndham Garden City Centre

- The Altstadt Brewery Path Walking Tour
- Rathaus, Old Town Hall
- Uerige Brewpub Tour (Düsseldorf) **4:00pm**
- **Partial Per Diem Provided**
- **Dinner Provided**

Lodge in Dusseldorf

DAY 3 Wednesday, 26 May 2021

Day Trip from Düsseldorf to Duisberg, Germany

- König Brewery Tour (Duisberg) **2:30pm**
- Zum Schlüssel Brewpub (Düsseldorf)
- Dinner Brauerei im Füchschen (Düsseldorf) **8:00pm reservation (need to make)**
- **Per Diem Provided**

Lodge in Düsseldorf

DAY 4 Thursday, 27 May 2021

Day Trip from Düsseldorf to Cologne, Germany

- Cologne Cathedral (Cologne) **10:30am**
- Kolsch Style Beerhouse-Malzmühler (Cologne)
- Boat trip on Rhine River (Cologne) **1:00pm**
- Süner Kolsch Brewery (Cologne) **4:30pm dinner & 6:00pm tour**
- **Per Diem Provided**

Lodge in Düsseldorf

DAY 5 Friday, 28 May 2021

Travel by train from Düsseldorf to Brussels, Belgium (**Depart 8:58am/Arrive 11:35am**). Hotel check-in: DC (Campanile) Brussel Drogenbos

- Brussels Chocolate & Beer City Tour including Royal Palace, Mannekin Pis Statue, Royal Galleries and Rue des Bouchers **2:00pm**
- **Per Diem Provided**

Lodge in Brussels

DAY 6 Saturday, 29 May 2021

- Day trip to Gent (Ghent), Belgium **9:30am**
- Boat Tour of Ghent **10:00am**
- Stadsbrouwerij Gruut (Ghent) **12:00pm**
- Duvel Moortgat Brewery Tour (Puurs, Belgium) **2:30pm**
- **Per Diem Provided**

Lodge in Brussels

DAY 7 Sunday, 30 May 2021

- Royal Museums of Fine Arts of Belgium, or walking tour of Ixelles neighborhood (Brussels) **9:30am**

Afternoon independent study travel

- **Per Diem Provided**
- **Housing Allowance Provided**

Either lodge in Brussels or afternoon departure for overnight stay elsewhere.

DAY 8 Monday, 31 May 2021

Independent Study Day

- **Per Diem Provided**

Return to Brussels by 10:00pm

Independent study travel to Paris (1h30m), Amsterdam (1h50m), or another Continental city is encouraged. Itinerary, including lodging information, must be submitted electronically to program instructor(s), 3 days prior to departure.

Lodge in Brussels

DAY 9 Tuesday, 1 June 2021

Day Trip from Brussels to Points North, including The Netherlands

- Bicycle self-tour from Oisterwijk to Tilburg, Netherlands **10:30am**
- La Trappe Brewery at the Abbey of Our Lady of Koningshoeven Tour (Tilburg, Netherlands). Lunch at **11:30am**, tour at **1:00pm**
- **Per Diem Provided**

Lodge in Brussels

DAY 10 Wednesday, 2 June 2021

Day Trip from Brussels to Points West in the Poperinge Beer District

- Boon Brewery (Halle) **9:00am**
- Sint Sixtus Abbey (Westvleteren) **12:15pm**
- Hoppecruyt Hop Farm Tour (Proven) **2:30pm**
- **Per Diem Provided**

Lodge in Brussels

DAY 11 Thursday, 3 June 2021

Day Trip from Brussels to Points South in the Wallonia Region

- Castle Malting Tour (Beloeil) **10:30am**
- Lunch at Mons Micro-brasserie Brasse-Temps **1:00pm**
- **Per Diem Provided**

Lodge in Brussels

DAY 12 Friday, 4 June 2021

- Brussels Center for Food Expertise **9:30am-11:30pm**
- Cantillon Brewery (Brussels) **1:00pm-2:30pm**
- **Per Diem Provided**

Lodge in Brussels

DAY 13 Saturday, 5 June 2021

Travel by train from Brussels to London, England (Depart 2:52pm/Arrive 4:05pm). Hotel check-in: Royal National Hotel

- Site visits to historic English Pubs with introduction to Cask Ale and Real Ale styles: The

Royal Oak; Ye Olde Cheshire Cheese; The Harp; The Wenlock Arms, or other

- **Per Diem Provided**

Lodge in London

DAY 14 Sunday, 6 June 2021

- Cultural tour of London with flexible itinerary that highlights Museums, Buckingham Palace, Government and Iconic Buildings, Popular Markets, Thames River, Parks, or other sites to match students' interests
- London Eye **2:30pm queue, 3:00pm board**
- **Per Diem Provided**

Lodge in London

DAY 15 Monday, 7 June 2021

- Fuller Brewery Tour **10:00am**
- Final In-Country Discussion/Debriefing
- **Per Diem Provided**

Lodge in London

DAY 16 Tuesday, 8 June 2021

Travel Day

- Shuttle/train to **Heathrow Terminal 2 (be at airport by TBDam)**
- Departure from London to Boston, via Dublin (**depart TBD:00pm**)
- Evening arrival in Boston **Terminal C (arrive TBD:50pm)**
- Shuttle from Logan Airport to RWU Global Heritage Hall (**arrive at TBD:30pm**)

POST-TRIP (via Bridges)

- **Journal Due Tuesday June 22, 2021**
- **Final Paper Due Tuesday June 29, 2021**

POST-TRIP (Bristol) August (Day TBD), 2021

- Laboratory Session (4 hours in Bristol)
 - Tasting, bottling, final debriefing
 - Lunch provided

**Note: This itinerary is subject to change based on availability of each event. Faculty reserve the right to add, delete, modify or otherwise revise events as required. A map of the trip is viewable here: <https://tinyurl.com/RWUCORE475-Map>*

Housing & Meals – Düsseldorf, Brussels & London (14 nights)

Each student will share a room with one or two other students of the same gender. We will be staying in Düsseldorf for 3 nights, traveling by train to Brussels for 8 nights, and then by train to London for the final 3 days of the learning experience, before returning to Boston. Housing in each place is located in safe neighborhoods, centrally located near to the city's centers, and frequented by tourists. The tuition includes an allowance for one hearty lunch or dinner meal per day, in a modestly priced restaurant. A light breakfast will also be included with the lodging.

Faculty

The professors leading this course are Dr. Cliff Timpson and Dr. Robert Cole, both of whom are full time employees of Roger Williams University. Dr. Timpson, Professor of Chemistry, has spent considerable time in Düsseldorf and many other European cities. Dr. Cole, Professor of Communication, has travelled extensively, and lived abroad. Cole has been brewing beer for a number of years and is passionate about sharing his knowledge of the craft and industry. Timpson has a deep appreciation for beers native to Northern Germany, as well as the ability to translate the important chemical processes of beer making into everyday terms for non-scientists. The faculty have visited these areas many times in the past and have led students on similar learning experiences abroad.

Student Eligibility & Fees

Students **MUST** be 21 years of age by the start of the course, be in good academic standing, and have no serious disciplinary infractions at RWU.

The fee for the 2021 program is **approximately \$4,595, plus airfare** (\$1,100 estimated). The fee includes:

- 3 credits for *CORE 430: Beer Culture*. **This will count as meeting the University's required Senior Seminar** course
- Transportation via shuttle from RWU campus to Logan Airport. Train, metro/buses and hired coach, to the field sites listed on the itinerary as well as within the cities of Düsseldorf, Brussels and London.
- Entrance fees to all museum, breweries, tours and other events listed on the syllabus
- Meal allowance per full day, in-country (\$30)
- Light breakfast provided each day
- Housing accommodations, including **an independent study day w/\$100 housing allowance as part of the program**. Independent day or overnight travel to Paris, Amsterdam, or other Continental city is encouraged, but students are also welcome to stay in Brussels.

In order to be considered for this program a deposit of \$600 should be paid at the Bursar's Office. If the applicant is not accepted into the program, the deposit will be refunded. Otherwise the deposit is non-refundable and is intended to hold the applicant's place in the program. There are a limited number of spaces that will be filled in the order of deposit date.

Your airfare must be paid by early December, 2020. The remaining tuition is due on February 28, 2021. This final payment must be submitted to the Roger Williams University Bursar.

Scholarship Opportunities:

The RWU Spiegel Center for Global and International Programs is offering \$700 - \$1,000 scholarships for this program. See the RWU study abroad website for more information on the "Bridging the World" or "Global Engagement" scholarships. Or, contact Becky Denson in the Spiegel Center (rdenson@rwu.edu or 401-254-3899).

Roger Williams University
CORE 475: Beer Culture (3 credits)

Curriculum Outline

A. Equipment and Hands-on Brewing Techniques

- a. Lab #1 (pre-trip) 5 hours

Readings: Garrett and Evans

B. Components and Chemistry of Beer

- a. Lab #2a (pre-trip) 2.5 hours in morning

- Overview of components of beer
- Hands-on touch, taste, smell, feel of ingredients (barley, hops, yeast)
- Chemistry of beer making

Readings: Garrett and Evans, BJCP Style Guide

C. Beer Styles

- a. Lab #2b (pre-trip) 2.5 hours in afternoon

- Overview of range of styles, including characteristics, regional varieties, and family groupings
- Identification of styles, including (taste & spit) sampling
- Characterizing/rating beer
- Contamination

Readings: Garrett and Evans, BJCP Style Guide

D. History & Culture of Beer

- a. In-country

- Mini-lecture related to each region
- Earliest origins of beer
- Beer in Germany from Middle Ages forward
- Contemporary cultural, moral, and legal attitudes

Readings: Course Packet

E. Modern Beer Industry

- a. In-country

- Mini-lecture related to each region
- Production scale; industrial versus artisanal/craft
- Tradition

- b. Post-trip

- Independent research for final paper

Readings: Course Packet

F. Packaging & Course Review

- a. Lab #3 (post-trip) 4 hours

- Kegging, bottling, aging and preserving beer
- Hands-on bottling of beer brewed in Lab #2
- Course review and final quiz

Readings: Review all materials