



Consortium Member Agreement & Privilege Definitions

NMSBrew is a Brewery Engineering program at New Mexico State University providing education, research, & service:

- a. a minor-of-study within in a Bachelor of Science chemical engineering curriculum;
- b. a dual-fermenter 1-barrel stainless steel brewery for hands-on training in operations (The Seidel Brewery Pilot Plant);
- c. a full-service beer characterization analytical laboratory;
- d. training workshops;
- e. summer workshops and safety training opportunities;
- f. international brewery studies; and
- g. an pipeline of highly-trained student interns and employees.

NMSBrew Consortium members are afforded these privileges (as dictated by membership level):

- a. Direct employment and recruiting of students pursuing the most rigorously trained problem-solving degree available at most institutions of higher education that achieves the learning outcomes defined by MBAA/ASBC for a 4-year program of study with content specific to the brewing industry.
- b. Access to NMSBrew Analytical Laboratory facilities, offering ASBC Methods of Analysis for ABV and other characterizations using modern analytical devices, including a 2017 Anton Paar PBA-B Generation M Packaged Beverage Analyzer.
- c. Use of the Seidel brewery pilot plant for recipe/method development. Consortium member provides all raw materials for the test batch, and may send personnel to NMSBrew to observe and provide oversight of the test batch. For list of equipment and process PFD, see chme.nmsu.edu/NMSBrew/.
- d. Discounted tuition and right of first refusal to the NMSBrew Summer Brewery Engineering Training Workshops.

Contact Information

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2018 Membership Level Dues and Privileges*:

Membership	Beer Analyses	Brewery Tests	Workshops	\$/year
Lager	2	0	4 th mailing	100
Bock	6	0	4 th mailing	250
Ale	14	0	4 th mailing	500
Pilsner	30	0	3 rd mailing	1,000
Porter	30	1	3 rd mailing	2,500
Stout	50	2	2 nd mailing	5,000
Brandywine	100	5	1 st mailing and 20% discount	10,000

* available at completion of pilot plant installation, estimated August 2018

NMSBrew Personnel:

Program Director: Dr. David A. Rockstraw, P. E.

Instructors:

- Dr. Catherine E. Brewer (Brewery Engineering)
- Dr. Kevin A. Lombard (Ag Extension horticulture specialist)
- Juanita Miller (Safety Specialist)
- Dr. Geoffrey Smith (Microbiology)
- Dr. Stephen Taylor (Brewing and Sensory Analysis)

Advisors:

- Jerry Grandle (The Spotted Dog Brewery, owner/head brewer)
- Lance Lusk (Miller Brewing Co., ret.)
- Tim Kostelecky (John I. Haas, Inc., ret)

Definitions

Anton Paar PBA-B Gen M beer characterizations - The following results will be included in each full beer characterization:

- alcohol by volume (ABV)
- density
- original extract
- real extract
- degree of fermentation
- calories
- turbidity
- color
- pH
- oxygen & CO₂

Brewery Pilot Batches- NMSBrew will operate the Seidel Brewery Pilot Plant to achieve the educational mission of the program, including an estimated 30-50 brews each year. Membership levels that include "brewery tests" affords that member the privilege to define the ingredients and processing conditions for one of these educational batches. Students will carry out the brew operating instructions and collect & characterize samples.

Training & Safety Workshops - NMSBrew will use the Seidel Brew Pilot Plant to deliver workshops relevant to the industry.