

# Better Process Control Schools

## A training program for the processed food industry

To prepare industry practitioners and help companies meet federal regulations, the GMA Science and Education Foundation (SEF) promotes the Better Process Control Schools (BPCS) throughout the year. The course is beneficial to personnel in plants that pack and thermally process low-acid and acidified foods in hermetically sealed containers. Since 2009, GMA SEF has been recognized by the U.S. Food and Drug Administration (FDA) with the authority to conduct company-specific on-site BPCS courses. In addition, GMA SEF partners with accredited institutions around the world to deliver scheduled programs throughout the year.

## Advancement in abilities & compliance with regulations

The FDA regulations in 21 CFR 108, 113, and 114 became effective May 15, 1979, requiring that each processor of low-acid or acidified foods operate with a certified supervisor on hand at all times during processing. These regulations are designed to prevent public health problems in low-acid and acidified canned foods.

The BPCS course also meets U.S. Department of Agriculture's (USDA) Food Safety and Inspection Service (FSIS) regulations 9 CFR 318.300 and 381.300 for thermally processed meat and poultry products implemented on June 19, 1987.

The BPCS subject areas include thermal processing system operations, microbiological food safety, equipment operations, and acidification and container closure evaluation programs for low acid and acidified canned foods.

## Many details to learn & more than one training option

Training is typically delivered by two instructors (University Professor and/or recognized Process Authority). BPCS training can run from two to four days depending on the amount of materials covered. In order to receive a certificate of completion, attendees must complete and pass 7 required chapters. There are 10 additional chapters that can be used to customize each school based on a plant's manufacturing needs. These chapters primarily cover specific processing equipment and methods.

## Who should attend Better Process Control Schools

The BPCS program is an important and valuable educational opportunity for mid-level managers and employees of food processing plants that utilize thermal processing.

The course is an excellent platform to improve food safety training for food safety and quality assurance personnel, individuals who work with canned and flexible packaged food products, academia, and government auditors and inspectors.

2016-2017

# Better Process

# Control Schools



Science and  
Education  
Foundation®

[www.gmaonline.org/sef](http://www.gmaonline.org/sef)

## Program Components

There are three training options to choose from:

- **Option 1:** Choose from one of 31 institutions listed in this catalog.
- **Option 2:** Contract the GMA SEF to hold a BPCS in your plant. Two instructors will be assigned to teach the course. For arrangements within the U.S. or internationally, contact: **Dr. Akhila Vasan** [avasana@gmaonline.org](mailto:avasana@gmaonline.org), 202-637-4810
- **Option 3:** BPCS training is also provided online.

At the completion of course work and examination, participants are awarded a certificate of completion, providing an additional respected credential to processing professionals.

**All schools offer training in English; additional languages are noted in the brochure.**

**All schools offer: On-Demand In-Person Training and Company-Specific Onsite Training.**

## Course Manual

The GMA SEF publication, *Canned Foods: Principles of Thermal Process Control, Acidification, and Container Closure Evaluation* (8th Edition) is **the only FDA approved text in the instruction of Better Process Control**. It can be purchased at [www.GMABooks.org](http://www.GMABooks.org). Also available soon in other languages—Spanish, Chinese, French, Bahasa Indonesia.

BPCS is comprised of several modules, each supplemented by a chapter from the *Canned Foods* manual. More information can be found in the “Course Content” box.

- **2-day BPCS** — Chapters 1,2, 4–8 (Federally mandated minimum)
- **3- and 4-day BPCS** — Additional chapters beyond the federally mandated minimum to customize program based on processor’s requirements

When customizing a workshop for a client, GMA SEF will recommend modules based on the client’s products, processing methods, and packaging system.

## 2016–2017 Participating Institutions

### Campden BRI (United Kingdom)

**BPCS: November 29–December 2, 2016**

**LOCATION:** Station Road, Chipping Campden, Gloucestershire, GL55 6LD, UK

**URL:** <https://www.campdenbri.co.uk/training/better-process-control-school>

**COURSE CONTACT:** Ms. Jo. Rathkey

[jo.rathkey@campdenbri.co.uk](mailto:jo.rathkey@campdenbri.co.uk), +44 (0) 1386 842104

**REGISTRATION CONTACT:** Jo Rathkey

[training@campdenbri.co.uk](mailto:training@campdenbri.co.uk), +44 (0) 1386 842104

### Chapman University

**2.5-Day Acidified Foods Workshop:**

**January 3–5, 2017 & August 7–9, 2017**

**4-Day Low Acid Foods Workshop:**

**January 3–6, 2017 & August 7–10, 2017**

**LOCATION:** One University Drive, Orange, CA 92866, USA

**URL:** [www.chapman.edu/bpcs](http://www.chapman.edu/bpcs)

**COURSE CONTACT:** Dr. Anuradha Prakash

[prakash@chapman.edu](mailto:prakash@chapman.edu), 714-744-7826

**REGISTRATION CONTACT:** Robyne Kelly

[rokelly@chapman.edu](mailto:rokelly@chapman.edu), 714-289-2040

## Course Content

1. Introduction
2. Microbiology of Thermally Processed Foods
3. Principles of Acidified Foods
4. Principles of Thermal Processing
5. Principles of Food Plant Sanitation
6. Food Container Handling
7. Records and Recordkeeping
8. Equipment, Instrumentation, and Operation for Thermal Processing Systems
9. Still Steam Retorts
10. Still Retorts Processing with Overpressure
11. Hydrostatic Retorts
12. Continuous Rotary Retorts
13. Batch Agitating Retorts
14. Aseptic Processing and Packaging Systems
15. Closures for Double Seamed Metal and Plastic Containers
16. Closures for Glass Containers
17. Flexible and Semirigid Containers

## Clemson University

OFFERS TRAINING IN SPANISH

**BPCS: September 20–23, 2016**

**BPCS: November 29–December 2, 2016**

**LOCATION:** Hampton Inn & Suites, Greenville Downtown Riverplace, Greenville, SC, USA

**COURSE CONTACT:** Dr. Felix Barron

[fbarron@clemson.edu](mailto:fbarron@clemson.edu), 864-656-5694

**REGISTRATION CONTACT:** Ms. Glenda Brown

[gbrwn@clemson.edu](mailto:gbrwn@clemson.edu), 853-656-5694

## Cornell University

OFFERS TRAINING IN SPANISH

**Acidified Foods Only: November 1–2, 2016**

**Low Acid and Acidified Foods: May 1–4, 2017**

**LOCATION:** 630 W. North Street, NYS Agric. Experiment Station Geneva NY 14456, USA

**URL:** [foodscience.cals.cornell.edu/extension/events](http://foodscience.cals.cornell.edu/extension/events)

**COURSE CONTACT:** Dr. Olga Padilla-Zakour

[qip1@cornell.edu](mailto:qip1@cornell.edu), 315-787-2255

**REGISTRATION CONTACT:** Ms. Gemma Osborne

[gro2@cornell.edu](mailto:gro2@cornell.edu), 315-787-2248

## Euroservizi Impresa SRL (Italy)

OFFERS TRAINING IN ITALIAN

**BPCS: November 21–23, 2016**

**LOCATION:** Abitart Hotel, Via Pellegrino Matteucci, 10–00154, Roma, Italy

Tel. +39 (0) 6454 3191, [www.abitarthotel.com](http://www.abitarthotel.com)

**BPCS: March 6–8, 2017**

**LOCATION:** Hotel Des Etrangers, 9–20146, Milan, Italy  
Tel. +39 (02) 4895 5325, [www.hoteldesetrangers.it](http://www.hoteldesetrangers.it)

**URL:** <http://www.euroservizimpresa.it/>

**COURSE CONTACT:** Dr. Claudio Gallottini

[info@euroservizimpresa.it](mailto:info@euroservizimpresa.it), +39 (0) 7580 84352

## Food Processing Specialists— Retort Supervisor and Process Control School (New Zealand, Australia)

**New Zealand Retort Supervisors and  
Process Control School: Dates TBD**

**LOCATION:** New Zealand

**Australian Retort Supervisors and  
Process Control School: Dates TBD**

**LOCATION:** Australia

**LOCATION:** 16 Warren Avenue Prospect SA 5082 Australia

**URL:** [foodprocessingspecialists.com.au/training/](http://foodprocessingspecialists.com.au/training/)

**COURSE CONTACT:** Ms. Julie Scholz

[julie@foodprocessingspecialists.com](mailto:julie@foodprocessingspecialists.com), + 61 4278 31321

**REGISTRATION CONTACT:** Mr. Mike Moffat

[mike@foodprocessingspecialists.com](mailto:mike@foodprocessingspecialists.com), +61 4770 43483

## Institute of Food Technology–ITAL (Brasil)

OFFERS TRAINING IN PORTUGUESE

**BPCS: May 8–12, 2017**

**LOCATION:** Av. Brasil, 2880, Campinas SP 13070-178, Brasil

**URL:** [www.ital.sp.gov.br/gepc/](http://www.ital.sp.gov.br/gepc/)

**COURSE CONTACT:** Dr. Maria Isabel Berto

[miberto@ital.sp.gov.br](mailto:miberto@ital.sp.gov.br), +55 1937 431835

**REGISTRATION CONTACT:** Dr. Michele Berteli

[berteli@ital.sp.gov.br](mailto:berteli@ital.sp.gov.br), +55 1937 431829

## JBT FoodTech

OFFERS TRAINING IN SPANISH AND ITALIAN

**BPCS: Dates TBD**

**LOCATION:** 2300 Industrial Avenue, Madera, CA 93637, USA

**CONTACT:** Karen Brown, [Karen.brown@jbt.com](mailto:Karen.brown@jbt.com), 559-661-3345

## King Mongkut's University of Technology Thonburi (Bangkok) (Thailand)

OFFERS TRAINING IN THAI

**BPCS: December 13–17, 2016**

**LOCATION:** 126 Pracha Utit Road, Banmod, Thungkru, Bangkok 10140

**URL:** [www.cec.kmutt.ac.th](http://www.cec.kmutt.ac.th)

**COURSE CONTACT:** Dr. Tipaporn Yoovidhya

[Tipaporn.yoo@kmutt.ac.th](mailto:Tipaporn.yoo@kmutt.ac.th), +66 2470 9241

**REGISTRATION CONTACT:** Wararuck Wilai

[Wararuck.wil@kmutt.ac.th](mailto:Wararuck.wil@kmutt.ac.th), +66 2470 9630 - 4

## Louisiana State University

OFFERS TRAINING IN SPANISH

**BPCS: January 9–12, 2017**

**BPCS: July 27–27, 2017**

**LOCATION:** 212/214 Efferson Hall, Baton Rouge, LA 70803, USA

**URL:** [www.lsu.edu/departments/nfs/outreach/training.htm#p5](http://www.lsu.edu/departments/nfs/outreach/training.htm#p5)

**COURSE CONTACT:** Ms. Evelyn Gutierrez

[MEGutierrez@agcenter.lsu.edu](mailto:MEGutierrez@agcenter.lsu.edu), 225-578-5207

**REGISTRATION CONTACT:** Ms. Sharonda Cooper-Epps

[SCooper@agcenter.lsu.edu](mailto:SCooper@agcenter.lsu.edu), 225-578-5207

## Mars Global Food Safety Center (China)

OFFERS TRAINING IN CHINESE

**LOCATION:** Yanqi Economic Development Zone, Huairou, Beijing, China, 101407

**URL:** [http://www.mars.com/global/](http://www.mars.com/global/science-and-innovation/science/food-safety)

[science-and-innovation/science/food-safety](http://www.mars.com/global/science-and-innovation/science/food-safety)

**CONTACT:** Cindy Sun, [cindy.sun@effem.com](mailto:cindy.sun@effem.com)

## McGill University (Canada)

**BPCS—2-day workshop: March 13–14, 2017**

**BPCS—4-day workshop: March 13–16, 2017**

**LOCATION:** 21,111 Lakeshore, Ste-Anne-de-Bellevue QC H9X3V9, Canada

**URL:** [www.mcgill.ca/macdonald/programs/fsqp/workshops](http://www.mcgill.ca/macdonald/programs/fsqp/workshops)

**CONTACT:** Dr. Brigitte Cadieux

[fsqp.workshops@mcgill.ca](mailto:fsqp.workshops@mcgill.ca), +1 514 398 7544

## Michigan State University

**Two day—Acidified Foods, BPCS: October 25–26, 2016**

**Four day—Acidified Foods and Low Acid Canned Foods, BPCS: October 25–28, 2016**

URL: [events.anr.msu.edu/BPCSOct2016/](http://events.anr.msu.edu/BPCSOct2016/)

**Two day—Acidified Foods, BPCS: March 7–8, 2017**

**Four day—Acidified Foods and Low Acid Canned Foods, BPCS: March 7–10, 2017**

URL: [events.anr.msu.edu/BPCSMarch2017/](http://events.anr.msu.edu/BPCSMarch2017/)

LOCATION: 1129 Farm Lane East Lansing MI 48824, USA

COURSE CONTACT: Ms. Ashley Schwieterman  
[schwiet6@anr.msu.edu](mailto:schwiet6@anr.msu.edu), 517-884-8810

REGISTRATION CONTACT: ANR Event Services,  
[events@anr.msu.edu](mailto:events@anr.msu.edu), 517-353-3175

## New Mexico State University

OFFERS TRAINING IN SPANISH

**BPCS—Acidified Foods Only (English Course):**

**August 8–9, 2016, March 21–22, 2017**

LOCATION: P.O. Box 30003 MSC 3AE, Las Cruces NM 88011, USA

**BPCS—All Foods (Spanish Course):**

**May 22–26, 2017**

LOCATION: Mexico City, Mexico

URL: [http://aces.nmsu.edu/ces/foodtech/better-process-control-s.html#anchor\\_161088](http://aces.nmsu.edu/ces/foodtech/better-process-control-s.html#anchor_161088)

COURSE CONTACT: Dr. Nancy Flores  
[naflores@nmsu.edu](mailto:naflores@nmsu.edu), 575-646-1179

REGISTRATION CONTACT: Ms. Gloria Hernandez  
[glorhern@nmsu.edu](mailto:glorhern@nmsu.edu), 575-646-2198

## Northwest Food Processors Association

**BPCS: Dates TBD**

LOCATION: 8338 NE Alderwood, Suite 160 Portland OR 97220, USA

URL: [www.nwfpa.org](http://www.nwfpa.org)

CONTACT: Ms. Kirsten Ringen  
[Kirsten@nwfpa.org](mailto:Kirsten@nwfpa.org), 503-327-2220

## The Ohio State University

OFFERS TRAINING IN SPANISH

**BPCS: March 13–16, 2017**

**BPCS—Acidified Foods Only: June 14–15, 2017**

**BPCS (Spanish): August 7–10, 2017**

LOCATION: 2015 Fyffe Rd., 110 Parker Food Science, Columbus OH 43210 USA

URL: [www.go.osu.edu/bpcs](http://www.go.osu.edu/bpcs)

COURSE CONTACT: Dr. Valente B. Alvarez, [alvarez.23@osu.edu](mailto:alvarez.23@osu.edu)

REGISTRATION CONTACT: Ms. Heather Dean,  
[dean.840@osu.edu](mailto:dean.840@osu.edu), 614-292-7004

## Oklahoma State University

**BPCS: June 6–8, 2017**

LOCATION: 116 FAPC, Stillwater, OK 74078 USA

URL: [www.fapc.biz/workshops/processcontrol](http://www.fapc.biz/workshops/processcontrol)

COURSE CONTACT: Ms. Karen Smith  
[karenl.smith@okstate.edu](mailto:karenl.smith@okstate.edu), 405-744-6277

REGISTRATION CONTACT: Dr. William McGlynn  
[william.mcglynn@okstate.edu](mailto:william.mcglynn@okstate.edu), 405-744-7573

## Oregon State University

**Combined Acidified Foods and BPCS: December 12–15, 2016**

LOCATION: Dept. of Food Science & Technology, 100 Wiegand Hall, Corvallis, OR 97331, USA

URL: [www.oregonstate.edu/foodsci/2016-afs-bpcs](http://www.oregonstate.edu/foodsci/2016-afs-bpcs)

COURSE CONTACT: Dr. Mark Daeschel  
[mark.daeschel@oregonstate.edu](mailto:mark.daeschel@oregonstate.edu), 541-737-6519

REGISTRATION CONTACT: Ms. Debby Yacas  
[deborah.yacas@oregonstate.edu](mailto:deborah.yacas@oregonstate.edu), 541-737-6483

## Penn State University

**BPCS: May 1–4, 2017**

LOCATION: 301 B Ag Administration Building. University Park, PA 16802, USA

URL: [www.agsci.psu.edu/bpcs](http://www.agsci.psu.edu/bpcs)

COURSE CONTACT: Dr. Stephanie Doores  
[sdoors@psu.edu](mailto:sdoors@psu.edu), 814-863-2956

REGISTRATION CONTACT: Ms. Kristin Smeltzer  
[kkw115@psu.edu](mailto:kkw115@psu.edu), 814-865-8301

## Purdue University

OFFERS TRAINING IN SPANISH AND HINDI

**BPCS: May 8–12, 2017**

LOCATION: 745 Ag. Mall Drive, Department of Food Science, West Lafayette, IN 47907, USA

URL: [www.ag.purdue.edu/foodsci/extension/Pages/default.aspx](http://www.ag.purdue.edu/foodsci/extension/Pages/default.aspx)

COURSE CONTACT: Dr. Dharmendra Mishra  
[mishradh@purdue.edu](mailto:mishradh@purdue.edu), 765-494-2594

REGISTRATION CONTACT: Thomas Roberston  
[robertroberttl@purdue.edu](mailto:robertroberttl@purdue.edu), 765-494-7220

## Rutgers University

**BPCS: November 7–9, 2016**

LOCATION: Cook Campus, New Brunswick, NJ 08901, USA

URL: [www.cpe.rutgers.edu/food](http://www.cpe.rutgers.edu/food)

COURSE CONTACT: Ms. Dalynn Knigge  
[knigge@rutgers.edu](mailto:knigge@rutgers.edu), 848-932-7315

REGISTRATION CONTACT: Ms. Bianca Scardina  
[scardina@rutgers.edu](mailto:scardina@rutgers.edu), 848-932-7316

## Texas A&M University

**BPCS: October 9–12, 2017**

LOCATION: Courtyard Marriott, College Station, TX, USA

URL: [www.aggie-horticulture.tamu.edu](http://www.aggie-horticulture.tamu.edu)

COURSE CONTACT: Dr. Al Wagner  
[a-wagner@tamu.edu](mailto:a-wagner@tamu.edu), 979-845-7023

REGISTRATION CONTACT: Ms. Cindy Wise  
[cindywise@tpga.org](mailto:cindywise@tpga.org), 979-846-3285

## University of Alaska Fairbanks—Marine Advisory Program

**BPCS: February 15–17, 2017**

LOCATION: 118 Trident Way, Kodiak, AK 99615, USA

URL: <https://seagrant.uaf.edu/conferences/index.html>

COURSE CONTACT: Mr. Chris Sannito  
[csannito@alaska.edu](mailto:csannito@alaska.edu), 907-486-1535

REGISTRATION CONTACT: Astrid Rose  
[airose@alaska.edu](mailto:airose@alaska.edu), 907-486-1500



## University of Arkansas

**BPCS: November 1–3, 2016**

**LOCATION:** 2650 North Young Ave, Fayetteville, AR 72704, USA

**URL:** [www.uark.edu/ua/foodpro/Workshops/index.html](http://www.uark.edu/ua/foodpro/Workshops/index.html)

**CONTACT:** Dr. Steven Seideman

[seideman@uark.edu](mailto:seideman@uark.edu), 479/575-4221

## University of California–Davis

OFFERS ONLINE TRAINING

**In-Person Course: February 14–17, 2017**

**Acidified Foods Manufacturing School:  
September 12, 2017**

**LOCATION:** UC Davis Food Science and Technology, Davis CA 95616-8598, USA

**URL:** <http://ucfoodsafety.ucdavis.edu/>

**Better Process Control Schools/**

**COURSE CONTACT:** Dr. Linda Harris

[zgates@ucdavis.edu](mailto:zgates@ucdavis.edu), 530-752-5901

**REGISTRATION CONTACT:** Ms. Zann Gates

[bpcsonline@ucdavis.edu](mailto:bpcsonline@ucdavis.edu), 530-752-5901

## University of Georgia

**BPCS—Acidified Foods Only: November 8–10, 2016**

**BPCS: March 14–17, 2017**

**LOCATION:** 240 Food Science Building, 100 Cedar Street, Athens, GA 30602, USA

**URL:** [www.efsonline.uga.edu](http://www.efsonline.uga.edu)

**COURSE CONTACT:** Dr. Bill Hurst

[bhurst@uga.edu](mailto:bhurst@uga.edu), 706-542-2574

**REGISTRATION CONTACT:** Ms. Marian Wendinger

[marianw@uga.edu](mailto:marianw@uga.edu), 706-542-2574

## University of Hawaii

OFFERS TRAINING IN TAGALOG

**BPCS: March 21–24, 2017**

**Other Dates:** <http://www.foodsafetyhawaii.org/event/>

**LOCATION:** Asian Institute of Management Conference Center

**URL:** [www.FoodSafetyHawaii.org](http://www.FoodSafetyHawaii.org)

**CONTACT:** Dr. Aurora Saulo

[aurora@hawaii.edu](mailto:aurora@hawaii.edu), 808-226-1950

## University of Missouri

**Acidified Food Workshop: March 27–28, 2017**

**LOCATION:** 245 Stringer Wing, Columbia, MO 65211, USA

**URL:** <http://foodscience.missouri.edu/afw/>

**CONTACT:** Dr. Andrew Clarke

[clarkea@missouri.edu](mailto:clarkea@missouri.edu), 573-882-2610

## University of Nebraska–Lincoln

**BPCS—Acidified Foods Only: April 3–4, 2017**

**LOCATION:** Food Innovation Center, 1901 North 21st Street, Lincoln, NE 68588-6206, USA

**URL:** [fpc.unl.edu/bpcs](http://fpc.unl.edu/bpcs)

**COURSE CONTACT:** Dr. Jayne Stratton

[jstratton1@unl.edu](mailto:jstratton1@unl.edu), 402-472-2829

**REGISTRATION CONTACT:** Ms. Jill Gifford

[jgifford1@unl.edu](mailto:jgifford1@unl.edu), 402-472-2819

## University of Tennessee

OFFERS ONLINE TRAINING

**BPCS—Acidified Foods Only: February 27–28, 2017**

**BPCS (Full Course): February 27–March 2, 2017**

**LOCATION:** 2510 River Dr., Food Science Bldg., Knoxville TN 37996, USA

**URL:** <https://tiny.utk.edu/BPCS>

**CONTACT:** Mr. Nathan Miller

[nmille12@utk.edu](mailto:nmille12@utk.edu), 865-974-7287

## University of Vermont

OFFERS TRAINING IN SPANISH

**BPCS—Acidified Foods Only: Dates TBD**

**LOCATION:** 278 South Main Street, Suite 2, St. Albans, VT 05478-1866, USA

**URL:** <http://go.uvm.edu/foodsafetyforprocessors>

**CONTACT:** Dr. Omar Oyarzabal

[omar.oyarzabal@uvm.edu](mailto:omar.oyarzabal@uvm.edu), 802-524-6501 (x452)

## University of Wisconsin–Madison

**BPCS: April 24–27, 2017**

**LOCATION:** Pyle Conference Center 702 Langdon Street Madison WI 53706, USA

**URL:** [www.foodsafety.wisc.edu](http://www.foodsafety.wisc.edu)

**COURSE CONTACT:** Dr. Barbara Ingham

[bingham@wisc.edu](mailto:bingham@wisc.edu), 608-263-7383

**REGISTRATION CONTACT:** Ms. Angela Chopp

[angela.chopp@ecc.uwex.edu](mailto:angela.chopp@ecc.uwex.edu), 608-262-2451

## Washington State University

**Acidified Foods Only: February 6–7, 2017**

**4 day full course: February 6–9, 2017**

**LOCATION:** 106 FSHN Building, P.O. Box 646376, Pullman, WA 99164-6376, USA

**URL:**

<http://foodprocessing.wsu.edu/extension/training/bpcs/>

**COURSE CONTACT:** Dr. Girish Ganjyal

[girish.ganjyal@wsu.edu](mailto:girish.ganjyal@wsu.edu), 509-335-2845

**REGISTRATION CONTACT:** Ms. Cathy Blood

[blood@wsu.edu](mailto:blood@wsu.edu), 509-335-2845



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