Tuition and Payment Methods

Early Bird (Slows 2009)
(Must register and pay by February 1, 2016) U.S. $2850 pp
Regular Tuition U.S. $3050 pp

Group Discount: Register 2 or more from the same company, at the same time, for this course and receive a 10% discount off each registration.

Tuition payable in U.S. funds net of all charges. Payment is due at time of registration or upon receipt of invoice. If payment has not been received two weeks before the course, a credit card will be required to guarantee registration.

Discounts/Rates: To receive the Early Bird tuition rate, payment must be received at least one week prior to the expiration of early registration or the tuition rate will apply. All tuition prices are per a person rate. To qualify for the Group Rate discount, registration must be for two or more enrollments registering at the same time, from the same company, for the same course. Please note: Group Rate Discount cannot be combined with any other discount. Multiple discounts not applicable.

Cancellations/Substitutions/FEES: ALL cancellations must be in writing and emailed to info@cfpa.com. All cancellations are subject to a $300.00 cancellation fee. Applicants may cancel up to four (4) weeks prior to the course start date for a refund less cancellation fee. Applicants that cancel less than four (4) weeks prior to the course will be issued a credit less cancellation fee that can be used towards a future course up to one year from date of issuance. If you do not cancel and do not attend you are still responsible for the full payment. If for any reason, CfPA decides to cancel this course, we are not responsible for airfare, hotel or other costs incurred by the registrant. Program content, schedule and instructors are subject to change without notice. Substitutions are permitted at any time, must be in writing and emailed to Customer Service at info@cfpa.com.

Confirmation Letters: Before each course begins, all registrants will receive written Final confirmation including detailed information regarding course location – VIA EMAIL. We recommend that travel/ hotel arrangements not be made until final confirmation package is received. If confirmation is not received two weeks prior to the course, please contact Customer Service at info@cfpa.com.

Course photography / video: By registering and attending a CfPA course, you agree to have your photograph and/or video taken at the course venue, and you do not have any objections to CfPA using these photos and/or videos for marketing or any other CfPA Course and/or promotional purposes. You agree to release CfPA from any kind of claims arising out of copyright or privacy violations. All questions regarding this matter should be sent to Customer Service at info@cfpa.com.

Please note: English will be used in all lectures and course notes. For questions/more information contact Customer Service at 732-613-4500 or info@cfpa.com.

Send Invoice/Bill Me: Purchase Order # If Required __________________________
Check payable in U.S. funds to The Center for Professional Advancement
Credit Card □ Visa □ MasterCard □ American Express □ Discover
Card # __________________________ Exp. Date ________________

Cardholder Name (As appears on card) ________________________
Signature ________________________ Security code ________________
Credit Card billing address if different than above address? (3 or 4 digit code) ________________________

3 Ways To Register

• Internet: www.cfpa.com
• Fax registration form to: 732.238.9113
• Mail registration form to:
The Center for Professional Advancement (CfPA)
190 State Highway 18, Suite 203, East Brunswick, NJ 08816 USA

Registration Form

Course Offering # 1603-304
Granulation, Tabletting and Capsule Technology
March 14-17, 2016 • New Brunswick, NJ

Dr. M. M. (First Name) Last Name
Job Title __________________________
Company/Institution __________________________________________
City __________________________ State ____ Zip _______

E-mail Address ________________________________________________

Company/Institution __________________________________________
City __________________________ State ____ Zip _______

Phone __________________________ Fax __________________________

Purchase Order # (If Required) __________________________

Credit Card □ Visa □ MasterCard □ American Express □ Discover
Card # __________________________ Exp. Date ________________

Cardholder Name (As appears on card) ________________________
Signature ________________________ Security code ________________
Credit Card billing address if different than above address? (3 or 4 digit code) ________________________

Courses of Interest

• Design and Troubleshooting of the Granulated Product and Processes course id# 2569
• Drug Product Stability and Shelf-Life course id# 599
• Formulation Design and Troubleshooting of Pharmaceutical Dosage Forms: Tablets course id# 2593
• IKC/OTQ/01 course id# 2001
• Powders: Their Properties and Processing course id# 117
• Sterile Products: Formulation, Manufacture and Quality Assurance course id# 435

Terms and Conditions

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The Center for Professional Advancement (CfPA) is the largest accredited technical training organization in the world with a curriculum of approximately 450 short courses in 15 industries including Pharmaceutical, Biotechnology, Medical Device, Chemical, Cosmetics, Food and more.

Since our founding in 1967, we have successfully trained nearly a half million people worldwide in topics ranging from basic and introductory concepts to new advances and cutting-edge technology, and current U.S. and European regulations. CfPA courses are offered in a variety of formats – Public offering, Client Site and Online – to fit you or your company’s training needs.

Accreditations/Recertifications

The Center for Professional Advancement (CfPA) has been approved as an Authorized Provider by the International Association for Continuing Education and Training (IACET), 7916 Jones Branch Dr., Suite 300, McLean VA 22102 for 1.0 CEUs for programs that qualify under the ANSI/IACET Standards. CfPA will be awarded for participation in CfPA’s courses at the rates of 1.0 CEU per contact hour upon successful completion of the course and 70% accuracy in the required Learners’ Assessment.

The American Society for Quality (ASQ) Recertification Opportunities

The following information was provided courtesy of ASQ, and is not meant as an endorsement of CfPA products. It serves only as an informational guide about the certifications offered by ASQ. Many CfPA courses offer training that may be helpful in obtaining required ASQ’s recertification education units. To view a list of recommended courses that may be appropriate please visit www.cfpa.com. For more information about ASQ, contact them at: help@asq.org

SME Certified Manufacturing Engineers (CMfgE) and Technologists (CMfgT) may earn 24 certification credits for attending this program. Certification is valuable to everyone in industry. It is a recognized method of validating knowledge and skills in your field. For complete details on SME Certification, contact service@sme.org. One SME Drive,Dearborn, MI 48121, 1-800-733-4763

The Center for Professional Advancement offers many courses which have a chemical component. Such courses may earn up to 20 Certification Units toward certification by The National Certification Commission in Chemistry and Chemical Engineering, sponsored by The American Institute of Chemists.

The Center for Professional Advancement (CfPA) has agreed to follow RAPS- established operational and educational criteria. This course has been pre-approved by RAPS as eligible for up to 12 credits towards a participant’s RAC recertification upon full completion.

The Center for Professional Advancement
190 State Highway 18, Suite 203, East Brunswick, NJ 08816
Phone: 732.238.1600 • Fax: 732.238.9113
E-mail: info@cfpa.com

www.cfpa.com

Granulation, Tabletting and Capsule Technology
March 14-17, 2016 New Brunswick, NJ

Course Topics Include:
• Wet Granulation
• Tablet Formulation
• Tablet Troubleshooting
• Coating of Tablets
• Capsule Formulation/Filling
• Liquid Filled Capsule/Softgels

This course has been pre-approved by RAPS as eligible for up to 12 credits towards a participant’s RAC recertification upon full completion.

Directed by: Dr. Ceci W. Propst
Vice President Scientific Affairs
Team Engineering Services, Kalamazoo MI

SAVE $200-Register & Pay by February 1

www.cfpa.com
Who Should Attend
This broadly based course is intended for all scientists and technologists concerned with the development and processing of tablets, capsules and similar products, and with related regulatory affairs.

The material will be presented in such a way as to be of value to a varying level of expertise. This course will especially benefit those in:
- Quality Assurance
- Validation
- Marketing
- Purchasing
- Regulatory Affairs
- Manufacturing/Production
- Engineering Support

Note: Persons seeking an in-depth treatment of one or two of the major topics of this broadly based program may wish to consider alternative, more specialized courses offered by CfPA in this area of technology.

Learning Objectives
Upon completion of this course, you will be able to:
- Describe the basic design, development and processes involved in the manufacture of contemporary tabletted and encapsulated products

Course Description
The main aim of this course is to review the science relating to tabletted and encapsulated pharmaceutical products. The course begins with a consideration of raw material testing and the basic aspects of powder and granulation technology, progresses through formulation of solid dosage forms to tabletted and encapsulated pharmaceutical products. The course concludes with regulatory constraints that must be considered at each stage.

First Day
8:00 a.m.: Registration/Continental Breakfast
8:30–9:45 a.m.: Review of Learning Objectives Introduction and Course Overview
9:45–9:55 a.m.: Relevant Properties of Powders: Characteristic prediction; Single particle properties; Bulk properties; Particle/particle interactions and sampling
10:00–11:00 a.m.: Basic Principles of the Tabletting Process: Mechanical properties of powders; Die compaction; Quantifying compression variables
11:15–12:15 p.m.: Mixing and Blending of Powders: Segregation prevention; Strategy of mixing; Mechanisms of mixing; Types of mixing equipment; Mixer sampling
1:30–2:30 p.m.: Handling/Segregation/ Milling of Powders: Hopper and powder transfer methods; Mechanism of particle size reduction; Types of mills; Micronization
2:45–3:45 p.m.: Morphology of Powders: Particle size analysis; Surface area; Porosity; Particle shape
4:00–5:00 p.m.: Pharmaceutical Excipients: Types and their properties; Selection of excipients; Binder (tac and dty); Fillers, Disintegrants

Second Day
8:00–9:15 a.m.: Pharmaceutical Excipients (continued): Wetting agents; Anticaking agents; Glaubers and lubricants
9:30–11:00 a.m.: Development of Tablet Formulations: Designing tablet formulations; Processing tablet formulations; Quantifying tablet variables
11:15–12:15 p.m.: Wet Granulation of Powders: Reasons for granulation; Types of processes and equipment; Granulation structure, formulations and materials; Key control factors; Optimizing granule properties; Control of granulation end point
1:15–2:15 p.m.: Fluid Bed Granulation and Drying Process: Fluid bed granulation process; Key control factors and troubleshooting; Choice of granulation process; Methods of drying; Drying end point detection
2:30–3:30 p.m.: Size Enlargement Using Pressure: Pill compaction. Type and choice of compacters; Proper setup and tooling considerations; Critical controls; Extrusion: Why use? Types and choice of extruder; Axial, radial, basket; Spheronization: Types and choice of methods for spheronization; Method and controls
3:45–4:45 p.m.: Tablet Process and Equipment: Basic tabletting machine design; Contemporary tabletting processes; Tablet machine tooling; Press selection; Special types of tablets

Third Day
8:30–9:30 a.m.: Formulation and Filling of Two Piece Capsules: Mechanisms and theory of powder filling machines; Formulation and assessment of powders for filling; Interactions; Powder flow; Filling liquids and semi-solids into two piece capsules
9:45–10:45 a.m.: Non-Powder Capsule Products: Liquid-filled capsules; Non-powder solids, ground and granulated
11:00–12:00 noon: Coating of Tablets: Overview of approaches to coating-sugar and film coating. Film-coating materials and formulations; Film-coating problems related to formulation design
1:00–2:00 p.m.: Evaluation of Oral Solid-Dosage Forms: Weight and content uniformity; Dissolution; Frability
2:15–3:30 p.m.: Tablet Problems and Troubleshooting: Resolving weight, uniformity & dissolution issues, mechanical strength, frability; Investigating and remediating defects: Capping, lamination, picking, filming, cracks, chipping, disoloration
3:45–4:45 p.m.: Special Topics/Open Session

Fourth Day
8:30–9:30 a.m.: Scale-up and Technology Transfer for Oral-Solid Dosage Forms: Basic principles
9:45–10:45 a.m.: Coating Process and Equipment: Overview of coating methodologies; Film-coating problems related to coating process issues
11:00–12:00 noon: Modified Release: Types of modified release products; Overview of enteric coated products; Review of extended release products; Release kinetics; Formulation approaches used to prepare extended-release products
1:00–2:00 p.m.: Regulatory Constraints in Oral Solid-Dosage Form Development: Designing a QbD approach; Process and product; Q&D; Room design, contamination control, Use of PAT; Risk assessment: Parameter classification; DOE strategy: Knowledge space vs design space creation; Model centering; Qualification of equipment/ Process validation; Justification of material and equipment changes
2:15–3:30 p.m.: New Trends in Technology: BCS, I2 factor, biowaiver process, Quick dissolve; Soft Chews, Molded tablets; Tg, water activity, DVS measurements; Equipment innovations; Tablet presses, mixers and coating units
3:45–4:45 p.m.: Special Topics/Open Session
Assessment Opportunity

Granulation, Tableting and Capsule Technology
March 14–17, 2016 • New Brunswick, NJ • Offerings 1603-304

Client Site
Training at your site and at your convenience. For further information, please contact Client Site Programs. Direct Dial (USA) +1/732.238.1600, ext. 4547; or fax +1/732.238.9113; or E-mail clientsite@cfpa.com.

Online Training Now Available
A convenient and cost-effective way to experience our accredited training, easily access the knowledge you need through the Internet. For a list of upcoming courses visit www.cfpa.com/online-training.

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Course Director
Dr. Cecil W. Propst is Director Scientific Affairs for Team Engineering Service, a formulation and engineering support firm located in Kalamaazoo MI. He was Director of R&D (Grand Haven site) at SRI Pharma until semi retirement in 2015. He served as Director of Quality Assurance and Technical Services at Fleming and Company, and before that, President of Manufacturing Chemists. His duties included system design, product and process development and regulatory affairs. Previously, he served as cGMP Facilities Director for the University of Maryland at Baltimore, in connection with the University’s SPAC contract with the FDA. Dr. Propst also served as Director of Technical Development for Stellar Manufacturing; Director of Quality Compliance for SmitHinkle Beecham. Director, Quality Assurance for Nordahl Thayer (a Pvelon Company); and Group Leader/Product Development and Manager/Quality Control for Lewis Howe Company. He also serves as a consultant in the area of product development and process investigations for the chemical, diagnostic, food, engineering and beverage industries.

Additional Faculty
- Mr. Charles Cunningham, Technical Director, Colorcon Ltd.
- Mr. Dilip Parikh, President and CEO of DPharma Group
- Dr. Martin Thomas, International Sales Manager, Quatschcombe

Course Location
This course will be held in the New Brunswick, New Jersey area. Specific hotel information will be sent to you in your final confirmation package which will be emailed to you approximately three (3) weeks prior to the course start date. Please note that participants must make their own hotel reservations; the cost of the hotel accommodations is not included in the course fee. We recommend that travel/hotel arrangements be not made until final confirmation package is received.

- Easy access to Manhattan, Trenton, NJ and Philadelphia, all less than 40 minutes