

# DeltaV Global Education Program

Dedicated to education and research for the future of automation.



# Leading Educators Partnering with Emerson

Leading universities around the world are educating the future generation of process automation professionals. And Emerson, a world leader in process control and automation systems, is partnering with those learning institutions to provide real-world digital technologies and expertise.

Emerson Process Management's proven PlantWeb digital architecture is revolutionizing the way process manufacturers manage and connect their businesses by combining intelligent field devices, DeltaV™ digital automation systems, and advanced software. Dedicated to advancing cutting edge technologies such as wireless, advanced process control, and digital busses, Emerson combines key industry experience with

unparalleled expertise in the latest digital automation and smart safety instrumented system technologies.



## Precision Control

The DeltaV system, a key component of the PlantWeb® architecture, is the world's first digital automation system. Built from the ground up with today's commercially available technologies like PC workstations, Ethernet, and digital busses, DeltaV fully integrates "smart" plant capabilities



including HART®, FOUNDATION™ fieldbus, high-speed discrete busses, embedded advanced control, and advanced unit and batch management.

The DeltaV system is easy to learn, simulate, and use. From continuous to advanced batch applications it provides the perfect learning environment for university students.



## Committed to Education

*As the baby boom generation of process automation professionals retire, Emerson is committed to providing the technologies and expertise to develop the next generation of automation professionals. The DeltaV educational discount program provides universities and their faculties access to the automation systems their students will need to lead process manufacturers in the future.*

### SUCCESS STORY

## Emerson and U.S. National Science Foundation

The DeltaV system powers the test bed processes at the National Science Foundation (NSF) Engineering Research Center for Structured Organic Particulate Systems (C-SOPS), a partnership of Purdue University, Rutgers University, The State University of New Jersey, New Jersey Institute of Technology and The University of Puerto Rico at Mayaguez. C-SOPS' mission is to build the fundamental science base for the rational design, development and manufacturing of structured organic particulate products for

the pharmaceutical, food and agrochemical industries.

Graduate students from the consortium universities access the DeltaV system and embedded simulations remotely through a Purdue University VPN access point to advance the project's research.

## Explore



Students and professors can use DeltaV to explore process automation applications and new technologies, to gain new understanding of the behavior of dynamic systems. The DeltaV system can be used in the educational environment to tune traditional PID control, model predictive control, create neural networks, implement fuzzy logic, and perform variability analysis.

## Apply



Students can compare theory to proven technology, using DeltaV to model predictive control, apply neural networks to learn system processes, and analyze systems for optimal tuning. With the DeltaV system, students can solve multivariable or discrete control problems or investigate applications having elements of discrete, batch or continuous process control.

## Experience



Students can learn and develop valuable technical skills on industry-leading hardware and software. System experience on DeltaV, the industry's platform automation system of choice, can help build a knowledge base for dynamic simulation, operator training, and system testing, which students can take into industry as the next generation of process control leaders.

## Expand



The DeltaV digital automation system is used by leading universities worldwide to research, write papers, and perform tests involving classical control, advanced process control, and data storage/management projects. In the United States alone, nearly a hundred universities and academic institutions use the DeltaV system in their utilities and academic curriculum. Join these leading universities in preparing the future process manufacturing leaders.

## Connect



Facebook is a popular social networking tool that is widely used among college students and graduates that are out in industry. Here students can ask and answer questions, communicate with other DeltaV users, share ideas, and network with industry professionals. This community is a hub to connect students, interns, process control professionals, Emerson experts, Emerson business partners, and everyone else with a common interest in the DeltaV system. Find it on Facebook as “**Process Control with Emerson’s DeltaV system**”.

## Emerson Academic Integration

*Join the over 500 teaching institutions worldwide in partnering with the industry-leader in process automation.*



### **Rich Learning Environment— Local or Remote**

The DeltaV system gives students an easy, embedded control system simulation environment for a rich learning experience. Students and professors can use the DeltaV software for off-line training, software testing, and system development without the need to purchase duplicate system hardware. Students can also remotely configure and troubleshoot DeltaV systems from their own computer with a direct LAN connection or from remote locations using a VPN or dial-up modem connection. Thus students can operate, configure, and diagnose processes from the classroom, lab, or across the internet from the dorm room.

### **Collaborative Partnerships**

Build the foundations for academic collaboration with Emerson through joint promotion and sponsorship of student programs, organizations, and events. Team up with Emerson on academic activities such as classroom projects and labs.

### **Expertise**

Engage Emerson professionals to provide on-campus training seminars and guest lectures. Let Emerson provide industry experts to collaboratively advance student and faculty research. Emerson also has the resources for web-based e-learning for refresher material and continuing education.

### **The Future of Automation**

System experience with DeltaV can help equip students with the tools and knowledge to be successful in industry. Partnering with Emerson can also open doors for employment opportunities for students as interns, co-ops, and full-time employees.

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