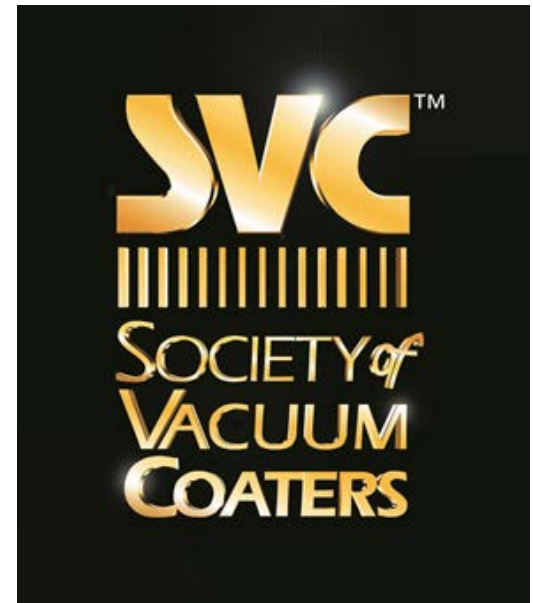


Education from a Professional Society Perspective

Scott Walton, PhD
SVC Director of Education



Shaping the Future of Vacuum Technology Education Workshop
Normandale Community College
October 30, 2020

The SVC Mission

To promote technical excellence by providing a global forum to inform, **educate**, and engage the members, the technical community, and the public on all aspects of vacuum coating, surface engineering and related technologies

Our Membership

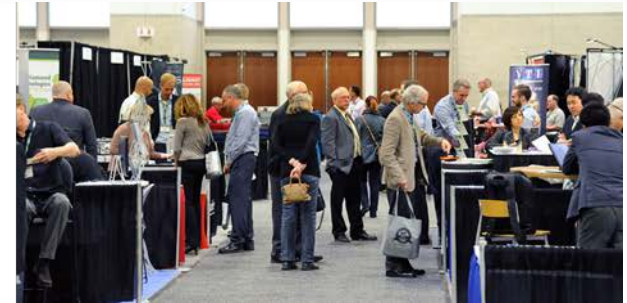
- SVC is a non-profit Society of Individual Members
- Established in 1957
- American Institute of Physics (AIP) Affiliate Society (2017)
- > 70 Corporate Sponsors
- ~ 700 Members from Industry, University & National Labs
- Membership levels:
 - Professionals: \$135 /year
 - Students & Young members (< 35 years old): \$40 /year.



Technical Conference



Networking



Exhibition/Tradeshow

The SVC “recipe”

Organized around “commerce” associated with the Vacuum Coating Industry

“Lubricated” with food, fellowship, and a view towards cooperative success



Education

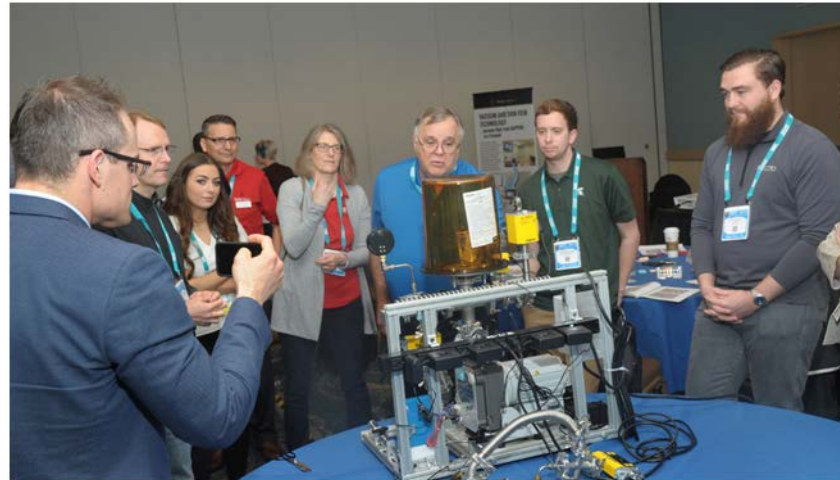


Publications

SVC Education Program: A Little Historical Perspective

- **The SVC education program (2017) was running on fumes**
 - Lowest TechCon enrollment and revenue in a decade
 - Other education programs were virtually non-existent
 - Net revenue for 2017
 - Budgeted ≈ \$ 166,000
 - Final ≈ \$ 88,000
- **Set out to develop “SVC 2.0” education program**
 - With urgency
 - Recognized opportunity for change

SVC Education Program: Guiding Principals



Integrate - Education program is interwoven with all aspects of the Society

Customer-Centric - SVC stakeholders define interest and needs

Practical Perspective - Priority on applied courses

Evolution and Growth - Course topics, instructors and platforms are changing

Embrace Risk - Embrace the risk of change, without being careless

SVC Education Program: Course Portfolio

More than 70 courses that cover topics associated vacuum coating and surface engineering
(<https://svctechcon.com/education-program/>)

- Vacuum Technology
- Deposition Technologies including PVD, CVD, Evaporation, and ALD
- Coating Technology for Optical, Tribological, Superconducting, Medical, and Electronic Applications
- Metrology and Film Characterization
- Business Topics

SVC Education Program: Platforms and Offerings



TechCon Tutorial Program: More than 45 in-person courses over 6 days for 2021

Live and On-Demand Webinar Program: Virtual courses that can be viewed in real-time or at the customers leisure

On-Location Tutorials: In-person courses taught at venues upon request

International Outreach Program: Tutorials in Germany, Korea, United Kingdom, Poland, and China

TechCon Education Program: Following our guiding principles

By the Numbers

Year	Courses	Seats	
2021	43		
2020	40	x	
2019	30	324	SVC 2.0
2018	24	248	
2017	21	143	SVC 1.0
2016	21	236	
2015	20	157	
2014	21	214	
2013	23	201	

Lessons Learned

- General deposition, sputtering, vacuum technology courses draw customers
- Practical courses draw customers
- Professionals are the majority of our customers
- Significant number of customers do not attend the TechCon
- Marketing outside the membership base appears to work

Webinar Program: Embracing risk

- **SVC 1.0 Webinar Program (developed circa 2010/11)**

- Live webinars**

- Offered: Periodically

- Duration: 3-4 hours

- Cost: \$150 - \$325

- On Demand**

- Offered: Continuous

- Duration: 3-4 hours

- Cost: \$100 - \$220

- **The problems ...**

- The Webinar space is crowded
 - Many webinars are free
 - Many webinars are short (~ 1 hour)
 - Webinar program was not meeting enrollment expectations

- **The Opportunities ...**

- Connect to our Enhanced Corporate Sponsor Program
 - Motivate TechCon attendance
 - Expand SVC web presence

SVC Webinar 2.0

- 11 webinars
- 9 instructors
- July – December 2020

As of October 16

- Registration: 128
- Attendance: 67
- Total views of on-demand: 149
- Total views of Vacuum Wizard: 184

Majority of attendees aren't from the SVC base

TechCon 2021 Nashville

Webinar 2.0

The SVC is pleased to announce the inaugural series of Webinar 2.0

Webinar 2.0 is comprised of a series of 60-90 minute interactive webinars led by SVC's extraordinary global team of instructors. These webinars will focus on topics that are traditionally presented in greater depth as a tutorial offered either in conjunction with the annual SVC TechCon or at a stakeholder's location, as part of our onsite program. Webinar 2.0 is enabled by the generosity of the SVC corporate sponsors and admission is free of charge. Pre-registration is required and we will limit the number of participants so that there is time for a question and answer session at the conclusion of each webinar. Afterwards, the recorded webinars will be posted to the SVC's new YouTube channel. Take a moment to review the program and register for what will surely be an informative and exciting "time well spent".

From all of us at the SVC we wish you the best. Be safe, stay healthy and we hope to see you next May in Nashville at the 2021 TechCon.

All Webinars are FREE of charge!

Webinar 2.0 is supported by the generosity of our Corporate Sponsors



All the webinars start at 11:00 a.m. (EST/EDT)

	Friday, July 24, 2020 M-130 Scanning Electron Microscopy Sample Preparation, Image Optimization, and Microanalysis Maja Koblar, Jožef Stefan Institute, Slovenia	COURSE INFO REGISTER
	Friday, August 7, 2020 C-218 Advanced Design of Optical Thin Films Ron Willey, Wiley Optical	COURSE INFO REGISTER
	Friday, August 21, 2020 M-201 Flexible Electronics Chris Muratore, University of Dayton	COURSE INFO REGISTER
	Friday, August 28, 2020 C-217 Practical Production of Optical Thin Films Ron Willey, Wiley Optical	COURSE INFO REGISTER
	Friday, September 18, 2020 C-208 Sputter Application for Industrial Applications Dave Glocker, Isoflux - retired	COURSE INFO REGISTER
	Friday, October 2, 2020 M-120 Design of Experiment for R&D Jeremy Grace, Idex Health & Science Semrock	COURSE INFO REGISTER
	Friday, October 16, 2020 C-220 Introduction to Two-Dimensional Materials Chris Muratore, University of Dayton	COURSE INFO REGISTER
	Friday, October 30, 2020 C-230 PVD Processing of Plastics for Better Protection, Reflection, and Decoration Gary Vergason, Vergason Technology, Inc.	COURSE INFO REGISTER
	Friday, November 13, 2020 M-210 Introduction to Solid-State Thin Film Batteries J.R. Gaines, Kurt J. Lesker Company	COURSE INFO REGISTER
	Friday, December 4, 2020 M-110 Introduction to X-ray Photoelectron Spectroscopy Matthew Linford, Brigham Young University	COURSE INFO REGISTER
	Friday, December 11, 2020 C-338 Application of Reactive Sputtering Ralf Bandorf, Fraunhofer IST	COURSE INFO REGISTER

For more information, contact the SVC at 505-897-7743

WWW.SVC.ORG

Gaps and Opportunities: The need for partnerships

Observation: We see a clear pull from the stakeholders for education

- Both employers and employees want education
- Most attended include:
 - Courses directed at our industry's basic skill sets
 - Course with an applied or “practical” orientation

Gap: “Reward” for taking the course

- Personal satisfaction
- Certificate of completion from the SVC

Opportunity: Accreditation

- Certificates
- Continuing Education Units
- Micro-credentials

The SVC does not have the resources to offer these types of credit

What does a micro-credential and partnership look like?

Duration: 9 – 12 month

Cost: \$2000 - \$3000

Format: Class room instruction + Short courses

Micro-credential in “Vacuum Deposition”

Normandale

VACT 1292: *Intro to Vacuum Technology (3 credits)*

VACT 2293: *Vacuum Analysis and Troubleshooting (3 credits)*

SVC

Required short courses (24 hrs.)

VT-230: *Design and Specification of Vacuum Deposition Systems*

C-103: *An Introduction to Physical Vapor Deposition (PVD) Processes*

C-212: *Troubleshooting for Thin Film Deposition Processes*

Elective short course (8 hrs.)

C-207 *Evaporation as a Deposition Process*

C-208 *Sputter Deposition for Industrial Applications*

C-250 *Pulsed Laser Deposition*

C-240 *Ion Beam Sputtering*

C-204 *Basics of Vacuum Web Coating*

Questions?

