

## Discover How SBE Can Help Take Your Career to the Next Level

2010 Wisconsin Broadcasters Clinic



#### **SBE President**

### Vinny Lopez, CEV, CBNT



#### **SBE Executive Director**

### John L. Poray, CAE



#### **SBE Certification Committee Chair**

# Jim Bernier, CPBE, CBNT





# Certified Broadcast Networking Engineer (CBNE)

\*Expected to debut in early 2011



### **SBE Certification Director**

## **Megan Clappe**



14 different certifications currently available.

4 - Entry-levels
7 - Engineering levels
3 - Specialists

# SBE Entry-level certifications

- Certified Television Operator (CTO)
- Certified Radio Operator (CRO)
- Certified Broadcast Technologist (CBT)
- Certified Broadcast Networking Technologist (CBNT)

### Engineering level certifications

5 years of broadcast engineering experience required

- Certified Broadcast Television Engineer (CBTE)
- Certified Broadcast Radio Engineer (CBRE)
- Certified Audio Engineer (CEA)
- Certified Video Engineer (CEV)

#### **COMING SOON**

SBE.

Certified Broadcast Networking Engineer (CBNE)

# SBE Engineering level certifications

10 years of broadcast engineering experience required

- Certified Senior Television Engineer (CSTE)
- Certified Senior Radio Engineer (CSRE)

20 years of broadcast engineering experience required as well as holding CSRE or CSTE

 Certified Professional Broadcast Engineer (CPBE)



To qualify for the SBE Specialist certifications, the examinee must hold an engineering level certification.

- 8-VSB Specialist (8-VSB)
- AM Directional Specialist (AMD)
- Digital Radio Broadcast Specialist (DRB)



- February
- April (at the NAB convention in Las Vegas)
- June
- August
- November

Certific	to apply for CBT b rof valid FCC Radio ied School letter mus	AM/FM D Television	on:	SOCIETY OF BROADCAST 9102 North Mer Indianapolis, IM Phone: (317) 80 Fax: (317) 845-9	idian Street, Suite 15 I 46260 5-9000
	Student fee: ded	uct \$48 from the non-member fee.	Send appli (Please typ	cation Attr: Certifica e or print)	ation Director
Payment	Method: 🛛 Check	Money Order (payable to SBE) An	rerican Express 🖾 Ma	asterCard D Visa	Total \$
Credit Car				9Securi	ty Code^
	Card (if different) signature strip on back	Billing Addro of card to the <b>right</b> of the (partial) card number (fi	ess (if different) er Ames, it is 4 non-raised o	ligits on the front).	
		tional membership in SBE through Mar pication will be used to determine eigibility		year (See back for mo	re information)
		First	MI	Home Phone	
Last Narr		rist	M		
Mailing A	ddress			Business Phor	1e
				( )	
City		State	Zip Code	() Fax Number	
Place of I	Employment	Di	ate Employed	Date of Birth (N	M/DD/YY) gettonwi
	lab Title on of Duties	Type of Facility		E-mail Address	5
Description Total year List in chro	on of Duties ins of responsible E protogical order, beg protogical order "Posibo ir us to correctly judg	Engineering Experience:	CE RECORD	Other (check all b gineering or related en als you give us about)	hat apply)
Description	on of Duties Ins of responsible E analogical order, beg zation under "Positio I to I	Engineering Experience: EXPERIENC Inning with the rest recent, all formal experi- n "Please do not limit ourself to the space	CE RECORD intence in Broadcast En as below. The more det SCRIPTION OF JOB DU	Other (check all b gineering or related en als you give us about)	hat apply)
Description Total year List in chro of specialo t will be for From	on of Duties ins of responsible E anclogical order, beg zation under "Positio ir us to correctly judg	Engineering Experience: EXPERIENC inning with the most recert, al formal dypa "Please do not imf your if to the space ay your application. ATTACH & BRIEF DES	CE RECORD intence in Broadcast En as below. The more det SCRIPTION OF JOB DU	Other (check all b gineering or related en alls you give us about: JTTES.	hat apply) ngloyment. Indicate fiel your background the e- Immediate
Descripti Total yea List in chro of specials t will be for From Mo Yr	on of Duties Ins of responsible ( brieflogical order, beg tation under "Position rus to correctly (udg To Mo Yr	Engineering Experience: EXPERIENC on the sector of the sector of the sector of "Person and the sector of the sector of the sector of the sector of the sector company Name and Location EDUCC	CE RECORD Interce in Broadcest En as below. The more det icremation of Job Di on P ATION	Other (check all d griesening or related en alls you give us about mes.  osition or Title	hat apply) (stoyment: indicate trai your background the ev Immediate Supervisor
Descripti Total yea List in chro of specialit t will be for From Mo Yr	on of Duties ars of responsible [ britogical order, beg zation under "Poblic Mo Yr Mo Yr MUST accompany a To To	Engineering Experience: EXPERIENC In Section 2 - Sec	CE RECORD Interce in Broadcast Em is below. The more def ICREPTION OF JOB DR on P ATION ATION I Credits or II	Other (check all d grieeting or related en alls you give us about mes. osition or Title rement, and if applying	hat apply) stoyment. Indicate Itel your background the ev Immediate Supervisor
Total yea List in chro of specials t will be for From Mo Yr	on of Duties ans of responsible E anstoqical order, beg cation under "Posible rus bio carrectiviudg Mo Yr Mo Yr MUST accompany a	Engineering Experience: EXPERIENCE arroys with the not even of the first even " Near 6 of the first even or registration ATACHER OFF Company Name and Locali Company Name and Locali EDUCC	CE RECORD Interior in Broadcast En as below. The more det CRIPTION OF JOB DU on P ATTION of the asperience regas	Other (check all d griesening or related en alls you give us about mes.  osition or Title	hat apply) stoyment. Indicate Itel your background the ev Immediate Supervisor
Descripti Total yea List in chro of specialit t will be for From Mo Yr	on of Duties ars of responsible [ britogical order, beg zation under "Poblic Mo Yr Mo Yr MUST accompany a To To	Engineering Experience:	CE RECORD	Course or Ma	hat apply) stoyment. Indicate Itel your background the ev Immediate Supervisor
Descripti Total yea List in chro of specials t will be for From No Yr	on of Duties rs of responsible I indigotal order, teg and the second second second rank to the second second second To Mo Yr Mo Yr Mo Yr Mo Yr	Engineering Experience: EXPERIENC In Standard Control and Control Company Name and Local Company Name and Local EDUCO Control of Local And Control Control of Local And Control Control of Local And Control Control of Local And Control One	CE RECORD  Intrino in Broadcast En intrino in Broadcast En intrino in Control Control  ATION  Of the apprintee recast  Credits or  Credits	Course or Ma	hat apply) gloymert. Indicate their Immediate Supervisor

Mo Yr	Mo Yr	or Technical Institute	Yrs Compl	Course or Major	Degr
					-
		ADDITIONAL INFORMATION R	EQUESTED ON REA	ERSE SIDE	_
NATION	AL CERTIFI	CATION COMMITTEE ACTION	ADMISSIONS	COMMITTEE ACTION	
		oved Date	Comment:	Disapproved Grade:	
Signature:			Signature	Del	e:

Certifi	e take the following e led Broadcast Radio En led Audio Engineer (CE BER FEE*: \$60	EA) Cortified	exam session: Broadcast Television Engineer Video Engineer (CEV) EMBER FEE: \$126	(CBTE) (CBTE) SE	OCIETY OF ROADCAST EN 22 North Maridian ite 150 fianapolis, IN 462 one: (317) 845-900
Cert	take the following e thed Senior Radio Eng MBER FEE*, \$05		exam session: d Senior Television Engineer (0 NEMDER FEE: \$161	Fa (STE)	x: (317) 846-9120 indust\$46 from non-men
Credit Ca Name on	rd#Card (if different)	Informery Order (payable to SBE Bit I card to the <b>right</b> of the (partial) card	Exp. D	ate Secur	Total \$
Non-Memi Information	n provided in this appli	anal membership in SBE thro cation will be used to determine First	ugh March 31 of the following algebilty: Mi	a year (See back for mo 	re information).
Mailing A	ddress	State	Zio Code	Business Phor	10
	Employment		Date Employed	Date of Birth (v	M/DD/YY) optional
Current J	ob Title	Type of Fac	lity	E-mail Address	5
			Radio TV	ngineering or related em	
List in chro	ration under "Position."	Please do not limit yourself to your application. ATTACH A BP Company Name and	REF DESCRIPTION OF JOB D	tals you give us about outnes.	ployment. Indicate your background the Immediate Superviso
List in chrs of specials it will be fo From Mo Yr	ration under "Position i r us to correctly judge i To Mo Yr	Plage do not imit yourself to your application ATTACHA BF Company Name and	EDUCATION	RUTIES.	irour background th Immediat Superviso

	ADDITIONAL INFORMATI	ON REQUESTED O	ON REVERSE SIDE
NATIONAL	CERTIFICATION COMMITTEE ACTION	ADMISS	SIONS COMMITTEE A
Approved Comment:	Disapproved Date:	Comment	ed Disapproved Grade
Senior Essay	Guestion #	Signature	

Signature:				

	CATION	rement, and if applying for Stud	ient Membersh
versity Institute	Credits or Yrs Compl	Course or Major	Degree
	REQUESTED ON REV		
ACTION	ADMISSIONS	COMMITTEE ACTION	
	Approved D	Disapproved Grade:	
	Comment:		
	Signature:	Det	

*3 digits in signature strip on back of card to the right of the (partial) card nu	American Express C Address (if different) mber (far Amer, it is 4 nes rai	DateSecuri	-9000 20 ication Director Total: \$
Payment Method:  Credit Cast  C	American Express C Exp Address (if different) mber (fir Amex, it is 4 non-rai	esse type ar print  MasterCard Visa DateSecuri	Total: \$
Credit Card #	American Express C Exp Address (if different) mber (for Amex, it is 4 non-rai	MasterCard Divisa	
Name on Card (if different)Billing ^3 digits in signature strip on back of card to the <b>right</b> of the (patial) card na Non-Member fee includes optional membership in SBE throug	p Address (if different) mber (for Amex, it is 4 non-rai		ty Code <sup>4</sup>
* 3 digits in signature strip on back of card to the right of the (partial) card nu Non-Member fee includes optional membership in SBE throug	mber (for Amex, it is 4 non-rai	sed digits on the front).	
	h March 31 of the follow		
		ing year (See back for mo	re information)
Last Name First		L Home Phone	
Las Name Pis		ii Home Priorie	
Mailing Address		Business Phor	10
City State	Zip Code	() Fax Number	
City State	Zip Code	Pax Number	
Place of Employment	Date Employed	Date of Birth (V	M/DD/YY) option
Current Job Title Type of Facilit		E-mail Addres	
Content boo mae	,	C-mail Plates	
Total years of responsible Engineering Experience: EXPER List in chronological order, beginning with the most recert, at form of specialization under "Position." Please do not limit yourself to the will be for us to crencify judge war application. TATCAH & BRE	IENCE RECORD al experience in Broadcas a spaces below. The more	Engineering or related en details you give us about	noloyment. Inde
From To			Immedi
		Position or Title	Supervi
Mo Yr Mo Yr Company Name and L			
Mo Yr Mo Yr Company Name and L			
No Yr No Yr Company Name and L			
Mo Yr Mo Yr Company Name and L			
From To College, University	DUCATION Credits or		
E	DUCATION	Course or Ma	jor I
From To College, University	DUCATION Credits or	Course or Ma	jor I
Prom To College University Bas Yr Mo Yr critechical Institute	DUCATION Credits or Yrs Compl		jor I
From To College, University	DUCATION Credits or Yrs Compl		

Appl Notified

Re

* 3 digits in signature strip on back of cand to th	BER FEE: \$121 ber fee. Order (payable to SBE) Americ	n: SBE 911 Inc Ph Fat	CIETY OF BROADC 2 North Meridian Stre- ianapolis, IN 46260 one: (317) 846-9000 1: (317) 846-9120	
Payment Method: D Check D Money + Credit Card #	Order (payable to SBE) 🛛 Americ			
Payment Method: Check Money Credit Card #	Order (payable to SBE) 🛛 Americ		nd application Attn: I	Continuenting Direct
Credit Card #				
* 3 digits in signature strip on back of cand to th		Exp. Date	Security	Code*
	Billing Address	(if different)		
Non-Member fee includes optional men Information provided in this application wil	nbership in SBE through March 3 If be used to determine eligibility.	1 of the following y	ar (See back for more	information).
			( )	
Last Name	First	MI	Home Phone	
			<u> </u>	
Mailing Address			Business Phone	
City	State Z	p Code	()	
uni y	Unite L	poule	T SOL TEGETION	
Place of Employment	Date	Employed	Date of Birth (MA	000/111 aptional
Current Job Title	Type of Facility		E-mail Address	
Description of Duties				
Total years of responsible Engineerin List in chronological order, beginning with of specialization under "Position." Please of well be for us to correctly judge your appli	EXPERIENCE the most recent, all formal experient to not limit yourself to the spaces b	RECORD	neering or related empl	loyment, Indicate fie
From To	Company Name and Location		sition or Title	Immediate Supervisor
	and a cocason		and the second second	Sup di Visto
	EDUCAT	ION		
From To C	ollege, University	f applying for Student	Membership.	
Mo Yr Mo Yr or	Technical Institute	Yrs Compl	Course or Majo	or Degri
ADD	ITIONAL INFORMATION REQ	JESTED ON REVI	RSE SIDE	

am currenth	D Cer	a specialist certification ified Audio Engineer (CEA		Certified 1	fideo Engineer ((	CEV)
ertified as: check all tha	t apply) 🖬 Cer	ified Broadcast Radio Eng ified Senior Broadcast Ra ified Professional Broadca	dio Engineer (CSRE	Certified 3	iroadcest Televis Jenior Broadcast	ion Engineer (CBTE) Television Engineer (CSTE)
B-VSB Sp AM Direct	ke the following sp pecialist bonal Specialist idio Broadcast Spec		SBE	SOCIETY OF BF 102 North Meridiar ndianapolis, IN 46 Thone: (317) 846-90	Street, Suite 15	
I wish to tal	ke the exam during	exam session:		ax: (317) 846-9120		
	Fee: 🖬 \$55		1	Send application /	Ntn: Certificati	on Director
Non-Mem	ber Fee 🖬 \$121		(Please type or pr	int)		
Payment Me	ithod: Check	Money Order (payable to	SBE) America	n Express D Mat	terCard Q Vis	a Total \$
Credit Card	¢			Exp. Dat	e6	Security Code*
	ard (if different)	card to the right of the (partial	_Bling Address (It			
		nal membership in SBE				more information)
nbroation p	rovided in this appli	cation will be used to deter	mine eligibility:			
ast Name		First		MI	Home Phor	
ast Name		First		M	Home Phor	1e
Aailing Add	7855				Business P	hone
and any state					( )	
Жy		State	e Zip	Code	Fax Numbe	H.
					-	
Place of Err	ployment		Date E	mployed	Date of Birt	p (NNDDVLA) Stepse,
Surrent Job	Title	Type of	Facility	F-mail Address		
Jurrent Job	libe	Type of	Facility	E-mai Address		
Description	of Duties					
			XPERIENCE R	0000		
ist in chrono	logical order, begins	ing with the most recent.	al formal experience	in Broadcast Engl	neering or related	employment for the last five
ears. Indicat ackground t	e field(s) of speciali he easier it will be fo	zation under "Position." Ple ir us to correctly judge you	rapplication. ATTA	Inself to the spaces CH A BRIEF DESC	below. The more RIPTION OF JO	details you give us about you B DUTIES.
From Mo Yr	To Mo Yr	Company Name			ion or Title	Immediate Supervisor
110 11		Company Hume	and Eoctation	1.034		initiatite supervisor
				_		
		ADDITIONAL INFOR	MATION REQUE	STED ON REVE	RSE SIDE	
	CERTIFICATI	ON COMMITTEE AC		ADMISSIONS C		ACTION
Approved	Disapproved D	oate:		Approved DD		ko:
Approved Comment:		Dato:		Approved DD Comment: Signature:		Date:

Signature



#### SBE Certifications are valid for 5 years.

- Recertification by Professional Credits
- Recertification by examination

# Examples of how professional credits may be obtained (but not limited to)

- Broadcast Engineering employment
- Continuing Education Credits (CEU)
- SBE Membership

SBE.

- Attendance at SBE Chapter Meetings
- Wis. Broadcasters Clinic (You're earning credit right now!)
- NAB attendance
- Factory or In-station schools
- SBE University, SBE Webinars, Ennes Workshops

#### **RECERTIFICATION SERVICE RECORD**

SBE MEMBER #

NAME:	

CERTIFICATION LEVEL(S): (\_\_\_\_\_\_# \_\_\_\_ EX. \_\_\_\_) (\_\_\_\_\_# \_\_\_\_ EX. \_\_\_\_)

#### LOCAL CHAPTER MEETING ATTENDANCE RECORD (FILL IN ACTUAL DATES)

YEAR	20	20	20	20	20
JAN					
FEB					
MARCH					
APRIL				· ·	
MAY					
JUNE					
JULY					
AUG					
SEP					
ост					
NOV					
DEC					

#### **OTHER RECORDS** (FILL IN ACTUAL DATES)

2.77		
CONVENTIONS/SEMINARS		
SBE EDUCATIONAL OPPORTUNITIES		
PAPERS AND PRESENTATIONS		
ELECTED OR APPOINTED CHAPTER/BOARD		
FACTORY/IN-STATION SCHOOLS		
MISCELANEOUS		



#### MAINTENANCE OF CERTIFICATION (Recertification)

#### (Revised April 2010)

The SBE Certification Committee has provided this handy folder on recertification at the suggestion of one of our chapter chairmen. There is space for you to keep record of your progress toward recertification, along with a list of professional credits which serve as a reminder that you must keep up with the "state-of-the-art" to remain certified.

It is worthwhile to restate the intent of the SBE Board of Directors when certification was established – that the continued technical development of broadcast engineers was the goal of the Certification Program. The individual growth of certified broadcast engineers and the growth of the professional status of the entire industry is still our major goal. It is not our desire to accomplish this solely through a testing program, but rather through the active participation of each of you in activities that increase your knowledge and value to our profession and to yourself.

#### Remember, it is your responsibility to maintain your own record of recertification credits.

During the final year of the five-year term of certification, application for renewal must be make to the National Certification Committee on forms available from the certification director or on the SBE website. After evaluation by the local committees, the applications will be returned to the certification director at the SBE National Office for further evaluation by the National Certification Committee.

We have set up the "Maintenance of Certification" Program so you have a great deal of flexibility in choosing the activities in which you wish to participate. We also recognize that some of you are located too far from an SBE chapter to regularly attend chapter meetings or other activities, so we have included several alternate categories that will allow you to earn professional credits toward recertification.

If you have any questions about other activities not listed, write to the Certification Committee now for assistance in meeting your own goals. Don't wait until it is time to apply for recertification...it may be too late then.

James T. Bernier, Jr., CPBE®, CBNT® Chairman National Certification Committee



### **SBE Suggested Reference Lists**

Books that you can take into the exams







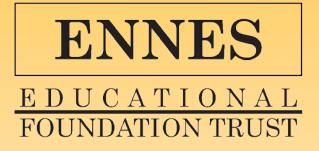
Your local SBE Chapter!



#### **SBE Education Committee Chair**

### **David Priester, CPBE**

# **Education Programs by SBE**



**SBE**<sub>™</sub>

#### Ennes Workshops presented by SBE





#### **SBE Leadership Development Course**



#### **SBE Education Director**

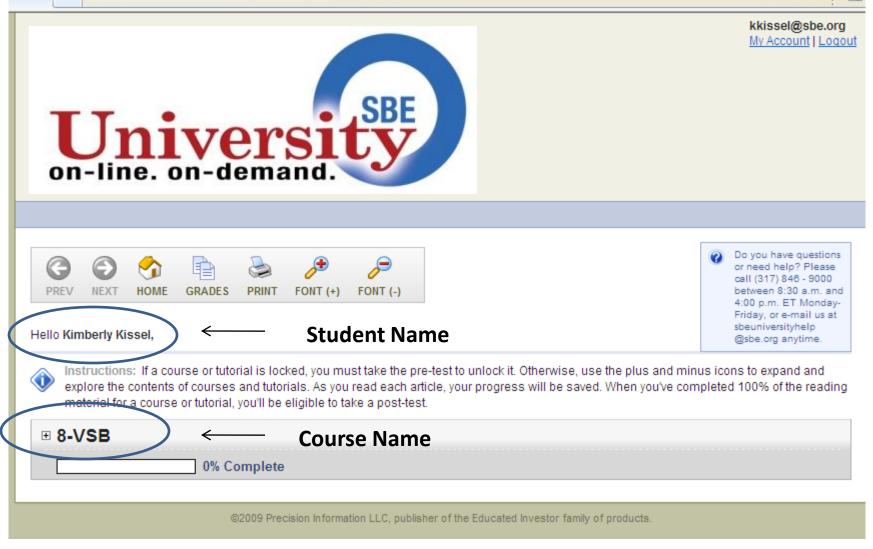
## **Kimberly Kissel**

# SBE SBE University • Online

- Set up like a book
- Available anytime, time and time again
- It's smart knows what areas the student has covered and the last section visited

### SBE University

- Exam at the end helps the student ensure material was retained
- Normally takes 8-14 hours to complete a course
- No course costs more than \$99 for SBE Members
- Register online anytime; link, id and passcode emailed automatically



#### Homepage

#### Once a student is logged in.

#### University on-line. on-demand.

Home > 8-VSB > 8-VSB > Introduction to 8-VSB



This course was written by Douglas W. Garlinger, CPBE, 8VSB, CBNT. Mr. Garlinger is a Fellow in the Society of Broadcast Engineers and a Trustee of the Ennes Educational Foundation. He was voted SBE Broadcast Engineer of the Year in 2002 and was selected as SBE Educator of the Year in 1994. Doug was the Director of Engineering of Indiana-based LeSEA Broadcasting Corporation for 23 years. Doug has served as the RF Engineering Manager at Mt. Wilson for NBC owned-and-operated stations KNBC-TV, KVEA-TV and KWHY-TV. Doug is also the author of the SBE Introduction to DTV RF. He is currently employed as a Senior Broadcast Engineer for Qualcomm MediaFLO.

The purpose of this course is to give the student an overview of the 8-VSB system from end to end, providing all the basic information he or she will need to understand the nature of 8-VSB modulation and to recognize deficiencies in the transmitted signal. This information will be invaluable in installing, maintaining and operating a digital television transmitter facility.

Much of the material contained in this course will aid the student in his or her efforts to obtain the SBE 8-VSB Certification.



TUTORIAL NAVIGATION	
2.	8-VSB Overview
3.	Video Compression
4.	DTV Audio
5.	Active Format Description
6.	PSIP
7.	8-VSB Signal and Channel Occupancy
8.	The 8-VSB Transmitter Part 1 (Data Processing)
9.	The 8-VSB Transmitter Part 2 (Modulator and Filtering)
10.	8-VSB Spectral Display and Mask
11.	8-VSB Transmission Monitoring
12.	8-VSB Receiver
13.	Television Power
14	DTV Service Areas

15. Summary of 8-VSB



- Subjects of interest to broadcast engineers
- Online seminars presentation over the Internet, audio via streaming or telephone
- Available live or on-demand
- Affordable Free up to \$99





#### Why attendees find webinars useful

"While I'm interested in *traditional* in-person seminars, scheduling is often a problem and often prevent my attending."

"Regret that I was unable to attend the live webinar (due to work demands), but thank you VERY MUCH for providing this....I found the information extremely useful and helpful!!"

# SBE. Webinars by SBE

**On-Demand Webinars Currently Available ATSC Mobile DTV EAS Update for Broadcasters SBE RF Safety Course** Human Factors in Broadcasting Maximizing HD and 1080p/60 Cable Performance Leadership Development Series (3 webinars) 1) The Function and Nature of Leadership 2) Communication 3) Motivation **Event Frequency Coordination** 

# **SBE.** Webinars by SBE - Upcoming

FCC Self Inspection Checklist November 18, 2010 · 2:00 – 3:30 p.m. ET Price: SBE Members - \$39; Non-Members - \$55 Instructor: Dennis Baldridge, CPBE, 8-VSB, AMD, DRB, CBNT

Covers the purpose, scope and limitations of the FCC self inspection checklist

For more information and to register for a webinar or course, visit <u>www.sbe.org</u>.

### **SBE.** Ennes Workshops

- Full day, educational workshop, normally held 9:00 a.m.-5:00 p.m.
- Breakfast and lunch included
- Affordable normally less than \$50 for SBE Members
- Relevant information technical topics of interest to those in radio, television and both
- Diverse group of 8-12 speakers
- Hosted by local SBE Chapters, sometimes in conjunction with another event or organization



"Great presenters, organization and schedule – learned tons."

- "My first Ennes I intend to attend more! Informative and enjoyable"
- "Thank you SBE for providing these workshops."

"Always learn something new. Enjoyed the sessions, will go again!"

"Always good content"

"Was a pleasure"

"High quality and very informative as usual"

"Excellent sessions. An incredible value in both time and money."

#### SBE Leadership Development Course

Held in Atlanta, Georgia, August 3-5, 2010

Largest attendance in course history

SBE.

25 attendees representing 9 companies

**3-Day Course** – 2 on introductory concepts and 1 on advanced concepts

**Instructor** – Rodney Vandeveer, Professor of Organizational Leadership and Supervision at Purdue University; Leadership Consultant

**Subjects** – the function and nature of leadership, building winning teams, leadership is an attitude, conflict management, leadership style assessment, communication and more

#### 2011 Course scheduled August 2-4 · www.sbe.org · Location TBD



"I found this program to be very important for me, for my job and my life. Many thanks."

"Will help me better understand my employees and be more patient."

"Engaging. Informed. Very well presented."

"a class every manager should attend!"

"Excellent program."

"It was well worth the \$\$ spent."

"I loved it!!!"

"Very glad I attended. Many colleagues speak highly of this course."



# SBE Store Books, SBE merchandise and SBE Membership and Certification Pins



#### **Questions?**

#### The Society of Broadcast Engineers www.sbe.org