

Cypress Creek EMS Basic Tactical Operational Medical Support Course

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The Cypress Creek EMS (CCEMS) Basic Tactical Operational Medical Support (BTOMS) Course is an international, 80+-hour, 8-day total immersion course in tactical EMS. It is open to personnel with any medical background (EMT Basic and above) to educate, train, and prepare them to operate within a tactical law enforcement environment. This course provides certification in the NAEMT's Tactical Combat Casualty Care (TCCC), as well as 91+ hours of CE/CHE credit in the three disciplines of EMS, fire, and law enforcement.

The BTOMS Course is held twice a year and has drawn law enforcement and medical professionals from around the country and the world, including Germany, Italy, Spain, England, Mexico, Brazil, New Zealand, Switzerland, Australia, and Canada. This course is the only Tactical EMS Training outside of Canada that is officially approved by the Canadian government.

The BTOMS Course is not a SWAT school. It is a program to teach medics how to operate in the tactical operations medical support role—hence the use of “basic” in the name. All Instructors are all currently operational—not “former” in any way—in public safety or military service or both. BTOMS is medicine based and does not perform any live fire exercises. It is also an excellent course for current practicing tactical medics to use as a refresher and continuing education course. The BTOMS Course is more than just a training course. It is an educational product accepted for CE credits in EMS (Texas), fire (Firefighter I and II), and law enforcement (TCOLE/POST). The National Registry of EMTs accepts Texas CE credits.

Total “immersion” during the course is achieved by having all lodging, food, and local transportation included in the tuition—teams travel together and live together. With some exceptions for local students, everyone (including instructors) stays in the same hotel. Students room with another student and everyone eats breakfast in the hotel restaurant. Lunch and dinner are cooked by CCEMS staff to improve the quality of the food and decrease down time. High-protein snacks and CERA hydration supplements are used throughout the day.

Team transportation is provided with the use of vans. Having the entire class and instructors staying on site together keeps the momentum going and helps keep the intensity of the training as high as possible. It also contributes to team building and camaraderie and enables maximum use of time.



Photo courtesy of Norm Uhl.

BTOMSC students practicing patient extraction techniques.

BTOMS's curriculum is broad based and includes canine medicine, expanded scope of practice, dental, nutrition, etc. (see the BTOMS Course Curriculum [Figure 1]). The curriculum changes from class to class to keep up with standards and advancement in tactics, techniques, and procedures; and (medical) best practices. The classes run late in the evening with “days” running well into “night” hours on most days, thus contributing to the intensity of the training. As seen from the curriculum, this is not a typical 8-to-5 course with only 1 or maybe 2 days of “night” training; this class goes well past supper almost every night.

Training is also comprehensive in that it accommodates different levels of medical training—from minimal (i.e., pure law enforcement or fire with limited medicine) all the way to physicians (i.e., surgeons and emergency physicians). The teams are organized to accommodate strengths and weaknesses of the participants and make the “team” as strong and functional as possible.

Evaluations are done daily rather than once at the end to provide continuous feedback from instructors, students, team cadre, and evaluation of the curriculum. Aid bags and

FIGURE 1 BTOMS Course Curriculum.

Day 1	SUN	4/28/2019 MOW – Donna Douglass		Business Casual
Start	End	Course	Location	Instructor
16:15	17:00	Welcome & Introductions & Course Expectations	Hilton Garden Inn	Nealy and Cadre
17:00	18:00	Threat Stress Management	Hilton Garden Inn	Sellers
18:00	21:00	Keynote: Baton Rouge PD Ambush Attack	Hilton Garden Inn	Col Dan Godbee, MD

NOTES:

Day 2	MON	4/29/2019		Green / Tan
Start	End	Course	Location	Instructor
7:30	9:00	Operator Wellness-Nutrition, Strength & Conditioning	Gonzales / King Room	ATH / Hermann Staff
9:00	11:00	Practical Rotation - Physical Agility Test	ATH Training Facility	Cadre
11:00	11:30	Asset and Resource Management	Gonzales / King Room	Sellers
11:30	12:15	MTA, Site Survey, and Documentation	Gonzales / King Room	Sellers
12:15	13:00	LUNCH	BLS Classroom	CCEMS Staff
13:00	14:00	Protocols and Pharmacology	Gonzales / King Room	Col Dan Godbee, MD
14:00	15:00	Extended Operations and Base Of Ops	Gonzales / King Room	Nealy
15:00	16:00	Remote Assessment / BATH - Sensory Dep	Gonzales / King Room	Sellers and Cadre
PRACTICAL ROTATIONS				
16:00	17:00	A - Near (Gear) / B - Far (Guidon)	South Parking Lot	NEAR-Tomlinson/Douglass (FI) Price / Cooper (RP)
17:00	18:00	B - Near (Gear) / A - Far (Guidon)	Main Entry	FAR1-Wells (FI) Barnes (LE) Owsley (RP) FAR2-Schaefer (FI) Brockman (LE) Jones (RP)
16:00	16:30	C and D - Bleed Sweep	CPR Lab	Sellers, Paul Garcia
16:30	18:00	C and D - MMU Lecture	Gonzales / King Room	Sellers, Col Dan Godbee, MD
18:00	19:00	C - Near (Gear) / D - Far (Guidon)	South Parking Lot	NEAR-Tomlinson/Douglass (FI) Price / Cooper (RP)
19:00	20:00	D - Near (Gear) / C - Far (Guidon)	Main Entry	FAR1-Wells (FI) Barnes (LE) Owsley (RP) FAR2-Schaefer (FI) Brockman (LE) Jones (RP)
18:00	18:30	A and B - Bleed Sweep	CPR Lab	Sellers, Paul Garcia
18:30	20:00	A and B - MMU Lecture	Gonzales / King Room	Sellers, Col Dan Godbee, MD
20:00	20:30	Evaluation / Hot Wash	Gonzales / King Room	Nealy
20:30	21:30	DINNER	BLS Classroom	Cadre
Day 3	TUES	4/30/2019		Black / Green
Start	End	Course	Location	Instructor
6:00	6:30	Physical Training	Hotel Lobby/Parking	Sellers and TICs
6:30	7:30	Breakfast	Hilton Garden Inn	Hotel Staff
7:30	8:00	Travel to CCEMS	Lobby	Van Drivers
8:00	8:15	Guidon Presentation	Gonzales / King Room	TICs and Cadre
8:15	9:30	Introduction to TCCC	Gonzales / King Room	Sellers
9:30	10:30	TCCC: Care Under Fire	Gonzales / King Room	Sellers
10:30	11:30	Tactical Extractions	Gonzales / King Room	Nealy
11:30	12:00	Tourniquets	Gonzales / King Room	Sellers
12:00	12:45	LUNCH	BLS Lab	CCEMS Staff
PRACTICAL ROTATIONS				
13:00	14:00	CUF - Tourniquet Skills - A and B	59 Bay	Douglass, Price, Wells, Richardson, Coby, Garcia, Owsley
		Extractions Skills - C and D	Drainage Area	Tomlinson, Cooper, Barnes, Jones, Brockman, Schaefer
14:00	15:00	CUF - Tourniquet Skills - C and D	59 Bay	
		Extractions Skills - A and B	Drainage Area	
15:15	16:15	Handcuffing and Use of Force	Gonzales / King Room	Sellers
		Practical Rotations		
16:15	17:45	Handcuffing Skills (Corporate)	Cravens Room	All Cadre
18:00	19:00	Less Than Lethal (SIM / TASER)	Gonzales / King Room	Nealy
19:00	19:15	HOT Wash - Orders		Nealy
19:15	19:30	Travel To Dinner	Lobby	Van Drivers

(continues)

FIGURE 1 *Con't.*

Day 3	TUES	4/30/2019		Black / Green
Start	End	Course	Location	Instructor
19:30	21:00	Dinner	Rico's Mexican Grill	Cadre
6:00	6:30	Physical Training	Hotel Lobby / Parking	Sellers and TICs
6:30	7:30	Breakfast	Hilton Garden Inn	Hotel Staff
Day 4	WED	5/1/2019		Tan / Black
Start	End	Course	Location	Instructor
7:30	8:00	Travel To CCEMS	Lobby	Van Drivers
8:00	8:15	TCCC - Tactical Field Care / MARCH	Gonzales / King Room	Sellers
8:15	9:00	Basic and Advanced Airways	Gonzales / King Room	Col Dan Godbee, MD
9:00	9:30	Tension Pneumothorax	Gonzales / King Room	Col Dan Godbee, MD
9:30	10:00	Hemorrhage Control - Wound Packing / JETT	Gonzales / King Room	Col (Ret) John Holcomb, MD
PRACTICAL ROTATIONS				
10:00	11:00	TFC - Airway / Needle Decomp. Skills - A and C	Sim Lab	Douglass, Godbee, Malone, Wells, Garcia, Scahefer, Richardson
		Hemorrhage Control - B and D	59 Bay	Barnes, Owsely, Price, Coby, Jones, Brockman, Tomlinson, Cooper
11:00	12:00	TFC - Airway / Needle Decomp. Skills - B and D	Sim Lab	
		Hemorrhage Control - A and C	59 Bay	
12:00	12:45	LUNCH	BLS Lab	CCEMS Staff
12:45	13:45	IV and IO (30 min) / TXA and Shock (30 min)	Cravens / King Room	Sharon Malone, MD
13:45	14:45	Fluid Resuscitation (30 min) / Hypothermia - Analgesics	Cravens / King Room	Sharon Malone, MD
14:45	15:45	Splinting / Documentation / Hostal Combatants	Cravens / King Room	Sellers
16:00	17:00	Tactical Evacuation Care	Cravens / King Room	Sellers
		Practical Rotations		
17:00	18:00	TFC - IV Skills (Corporate)	CPR Lab	All Cadre
18:00	19:00	DINNER	BLS Lab	CCEMS Staff
TESTING ROTATIONS				
19:00	20:00	TC3 Test / MTA Presentation - Teams rotate in 60 mins	Cravens / King Room	Price / Tomlinson
21:00		Skills Practice (Corporate)	CPR Lab	Douglass, Godbee, Malone, Garcia
	23:00	Trauma Lane - Pull team pairs as needed	Parking Lot	Cadre, UTPD SRRT, DPS SRT II
23:00	23:30	HOT Wash - Orders		Nealy
23:30	0:00	Travel To Hotel	Lobby	Van Drivers
Day 5	THURS	5/2/2019		Green/Tan
Start	End	Course	Location	Instructor
6:30	7:00	Breakfast	Hilton Garden Inn	Hotel Staff
7:00	7:30	Travel To CCEMS	Lobby	Van Drivers
7:30	9:00	Response to Active Shooter Incidents	Cravens / King Room	Nealy
9:00	10:30	K9 Emergencies	Cravens / King Room	LTC Joey Vest / Douglass
PRACTICAL ROTATIONS				
10:30	11:30	K9 Medical Skills - A and D	CPR Lab	Douglass and Cadre
		Handler Down - B and C	Cravens / King Room	(HCSO/HCCO4 K9s), Sellers
11:30	12:30	K9 Medical Skills - B and C	CPR Lab	
		Handler Down - A and D	Cravens / King Room	
12:30	13:15	LUNCH	BLS Lab	CCEMS Staff
13:15	15:15	Tactical Operations in Contaminated Environments	Gonzales / King Room	Sellers
15:15	16:15	Crime Scene and Evidence Preservation	Gonzales / King Room	Sellers
16:15	17:15	Medicine Across the Barricade	Gonzales / King Room	Sellers and Douglass
PRACTICAL ROTATIONS				
17:30	18:30	MAB - A and D PPE and DECON - B and C	CPR Lab / Board Room Parking Lot	HCSO Negotiators: 1) Douglass/Sellers 2) Nealy/Barnes/Jones Cooper and Cadre

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PRACTICAL ROTATIONS (cont.)				
18:30	19:30	MAB - B and C PPE and DECON - A and D	CPR Lab / Board Room Parking Lot	
19:30	20:00	Hot Wash	Cravens / King Room	Nealy
20:00	20:30	Travel To Dinner		Van Drivers
20:30	21:30	Dinner	Wolfie's	Cadre
Day 6	FRI	5/3/2019		Tan/Green
Start	End	Course	Location	Instructor
6:30	7:00	Breakfast	Hilton Garden Inn	Hotel Staff
7:00	7:30	Travel to Woodlands FD	Lobby	Van Drivers
8:00	9:00	Basic Handgun Course	Classroom	Sellers
PRACTICAL ROTATIONS				
9:00	10:30	Basic Handgun (A/B) O Course / CS Exposure (C/D)	Bravo Side Lawn Parking Lot	Sellers, UTPD Barnes, Douglass, Owsley, Wells, Coby, Schaefer
10:30	12:30	Basic Handgun (C/D) O Course / CS Exposure (A/B)	Bravo Side Lawn Parking Lot	
12:30	13:00	LUNCH	Main Bay	CCEMS Staff
13:00	14:00	Introduction to Close Quarter Battle	Classroom	Sgt S. Barnwell
PRACTICAL ROTATIONS				
14:00	16:00	CQB Entries (A/B) Tactical Movements (C/D)	Shoothouse Shoothouse	Nealy, UTPD, Barnes, Schaefer, Owsley Sellers, Wells, Tomlinson, Douglass, Coby
16:00	18:00	CQB Entries (C/D) Tactical Movements (A/B)	Shoothouse Shoothouse	
18:00	19:00	TASER Exposures (Corporate)	Main Bay	Nealy
19:00	20:00	HOT WASH - Dinner	Classroom	Sgt Martinez Nealy and Cadre
20:00	21:00	Travel To Hotel		Van Drivers
Day 7	SAT	5/4/2019		Red/Tan (TIC: Green/Tan)
Start	End	Course	Location	Instructor
6:00	7:00	Breakfast	Hilton Garden Inn	CCEMS Staff
7:30	9:00	Dental Lecture	Hilton Garden Inn	Jody Fourier, DDS
PRACTICAL ROTATIONS				
9:00	10:00	Dental Lab	Hilton Garden Inn	Jody Fourier, DDS
10:00	11:00	Written Exam	Hilton Garden Inn	TICs
11:00	11:30	Travel to Woodlands FD	Lobby	Van Drivers
11:30	12:00	FTX Briefing	Classroom	Sellers / TICs
12:00	13:00	LUNCH	Main Bay	CCEMS Staff
13:00	13:30	Final Scenario Prep and Walk-thru	Shoothouse	Sellers and Nealy
SCENARIO EVALUATIONS				
13:30	15:30	Clan Lab - (60 mins per) A/B then C/D	Shoothouse	Cadre
15:30	19:30	HRT - (Every 60 mins) A,B,C,D FTC - (Every 60 mins) B/CD, C/DA, D/AB, A/BC	Shoothouse Parking Lot	Cadre, UTPD SRRT, DPS SRT II Cadre, UTPD SRRT, DPS SRT II
19:30	20:30	Active Attack - (30 mins per) A/B then C/D	Shoothouse	Cadre
20:30	21:30	Dinner / Hot Wash / Clean up		Cadre and Students
21:30	22:00	Travel To Hotel		Van Drivers
Day 8	SUN	5/5/2019		Business Casual
Start	End	Course	Location	Instructor
9:00	9:30	Graduation Breakfast	Ballroom	Nealy and Sellers
9:30	10:30	Graduation Ceremony	Ballroom	Cadre
11:00	12:00	Hotel Check Out	Lobby	Nealy
11:00		Shuttle Runs Start	Lobby	Van Drivers

equipment are provided for use during the course. Interventions use real supplies from the aid bags, NOT verbalized. Students are encouraged to bring their own gear to wear during the course. CCEMS will provide medical aid bags, air purified respirators, and force-on-force protective equipment.

The skills and scenarios in the course are recent, realistic, and relevant. Participants are not placed in unrealistic situations in an effort simply to stress them. Threat stress is induced in a realistic form and the participant receives education and techniques to recognize and mitigate the effects of threat stress. Armed and unarmed medic training and scenarios are used to expose the participants to both sides of this controversial topic.

CCEMS is a Texas-approved education provider and issues CE credit approved by Texas Dept of State Health Services that, is accepted by the NREMT. It still exceeds accreditation standards as an educational product and requires achievement of minimum standards to pass. If the standards are not achieved, the student is given a certificate of attendance. Successfully completing all objectives to the requisite standard results in granting a certificate of completion. Not everyone meets the standard, and those who do not are not acknowledged as if they did.

The BTOMS classes get under way on a Sunday evening with a meet-and-greet social activity with refreshments followed by registration and introductions done during an evening meal together. Introductory classes are delivered and highlighted with a keynote presentation covering lessons learned from recent operations performed by some instructors in the class. Teams are then formed and preparations are made for classes and activities for the rest of the week.

Day 2 includes a few classes on conditioning and nutrition and several practical exercises on near and far assessments. In the morning, a physical fitness assessment is performed at Memorial Herman Athlete Training and Health (ATH). The assessment is focused on functional mobility specific to the job. Cypress Creek, ATH, and the Memorial Hermann IRONMAN Sports Medicine Institute developed a new testing and training program for tactical athletes. The first year of using ATH in BTOMS was 2018, and it has proved to provide a more functional and realistic physical assessment than other standard tests commonly used in SWAT. CCEMS tactical medics have participated in a comprehensive program that includes conditioning and strength training, and have followed a nutritional plan since 2015. This program has been expanded to include all CCEMS staff and a wellness program.

Days 3 and 4 include early morning formal physical training with an emphasis on team building. For the remaining days of the class, physical training is built into the class activities. Days 3 and 4 also include TCCC training with testing on the evening/night of day 4. Because the job of a tactical medic is to provide front-line medical support in high-risk law enforcement operations in case someone is shot or injured, day 3 also involved learning about different methods of extracting a patient from the hot zone and then drilling on those methods.

Frequently in high-risk law enforcement operations, such as an active shooter or a hostage situation, some of the officers on the scene have four legs. For that reason, day 5 introduces basic veterinary care. Tactical medics are called on to treat any Special Operator who is injured, and they have basic

veterinary training to help injured police dogs. If a handler is injured, the dog's instinct is to protect the officer even if medics are trying to help, so there is also training in how to safely separate a K9 from his or her handler.

Day 5 also provides instructional blocks on clandestine labs, crime scene and evidence preservation, medicine across the barricade, and personal protective equipment used in conjunction with decontamination. Other experiences include crisis negotiations, surrogate care, and medicine across the barricade working with real crisis negotiators using real equipment from mobile command centers to throw phones.

Among the activities on day 6 was tear gas training. Tactical medics will at some point be exposed to tear gas, so they need to know how to properly and quickly put on a gas mask, as well as how to clean that mask once it has been used. They also need to know what tear gas feels like and what to do for those who have been exposed. The students have to assess patient conditions and successfully triage patients in order of medical need to leave the gas house. Then, before the door is opened, they have to take off their masks and breathe in the gas. In a real life law enforcement situation, they may end up treating patients and continuing to work in an environment where tear gas has been deployed.

Day 6 also includes training in establishing a functioning mobile medical unit. Additionally, learning how to operate SIM weapons gives those without any firearms experience just enough to get through the exercises on day 7. Active shooter response training is essential and a hot topic. BTOMS active shooter training follows the Advanced Law Enforcement Rapid Response Training (ALERT) Active Attack Integrated Response (AAIR).

The tactical medic training culminates on day 7 with a comprehensive day of realistic scenarios. The drills included a clandestine lab exposure with multiple injuries and a hostage situation in which tactical medics are called in by the Texas Department of Public Safety SWAT team to assist. In the most intense scenario, the tactical medic students enter a building where active shooters have wounded multiple victims. Some are already dead, and the shooting is still going on when they enter the building. After neutralizing the threats, patients are evacuated from the building. Outside of the building, triage begins. The "role players" are Cypress Creek EMS employees and volunteers who put on quite a show for the students. Then patients are moved in order of medical need and put into arriving ambulances. The injured are then transported to a field hospital set up by South East Texas Regional Advisory Council for further lifesaving treatment.

Day 8 culminates with a graduation breakfast ceremony and presentation of certificates and awards. For each class, the faculty presents the best team with an award to recognize their excellence throughout the week. Each day during the week, the teams are scored and ranked objectively on their performance. Faculty and adjunct instructors are acknowledged for their contributions to the success of the program. Each class has a nearly 1:1 or 1:2 instructor:student ratio. Graduates of the program who demonstrate they possess the skill set, knowledge, and aptitude receive an invitation to return as adjunct instructors. Those who go above and beyond are extended an offer to join as faculty.

About Cypress Creek EMS

Cypress Creek EMS was formed in 1975 and covers an area north of Houston, Texas, that is larger in land mass and population than Atlanta, Georgia. CCEMS also handles 9-1-1 dispatch for 15 other emergency agencies, mostly fire departments. Cypress Creek is known for innovation. In the mid-1990s, CCEMS formed one of the first tactical medic teams in the country. That team now operates full-time, providing front-line medical support to local, state, and federal law enforcement agencies deployable anywhere in the country. Team members are certified both as paramedics and police officers. The CCEMS tactical medic team was the first in the country to carry whole blood in the field on missions and during training. In 2000, the CCEMS tactical Operators began offering their expertise to others through the BTOMSC. BTOMS is also one of three approved training courses for participation with the Texas Emergency Medical Task Force—TACTICAL EMTF-TAC response element supporting Texas DPS SWAT and SRT teams across the state. The military established the BTOMSC as a requirement for DoD EMS and Disaster Fellows at San Antonio. Cementing the military and civilian EMS partnership, this has developed over the years to include many graduates of the fellowship continuing their involvement as faculty members, and a recently implemented fellowship program where military physicians rotate in and out of Cypress Creek EMS as assistant medical directors. The twice-yearly course continues to attract professionals from all over the world.

For more information, including the September 2019 course, please go to <https://www.ccems.com/special-operations/basic-tactical-operational-medical-support-course-btomsc/>

Disclosure

The author of this article has participated in several tactical and medical courses over the years. He was invited to become a faculty member in the Cypress Creek EMS program after participating as a student and in conjunction with his role as medical director for the East Baton Rouge Parish EMS, and he uses this course for their tactical medics. Any opinions in this article are those of the author alone.

KEYWORDS: *Cypress Creek EMS Basic Tactical Operational Medical Support Course; tactical EMS; course; class*



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