Submachine Gun (SMG/M16/M4) Qualification Course

Ohio Peace Officer Training Academy

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I. DEFINITIONS

Administrative firearms procedures – firearms procedures that do not involve fire operation: initial loading; unloading; render safe; dis-assembly; assembly; function inspections; maintenance; cleaning; and storage.

Operational firearms procedures – firearms procedures that involve fire operation: shooting; reloading; stoppage clearance; and immediate action responses.

Threat assessment – action following target engagement to determine threat neutralization and/or to locate other threats.

SMG/M16/M4 index – mounting the SMG/M16/M4 in position at the shoulder for threat assessment or target engagement. The index can be designated as dominant or non-dominant according to the course of fire.

Dominant Index: the shooter's preferred shooting body side and hand.

Non-dominant index: the shooter's non-preferred shooting side and hand.

Low threat cover – the SMG/M16/M4 is indexed at the shooter's shoulder, muzzle approximately forty-five (45) degrees to the ground. The shooter's trigger finger is off the trigger, extended along the SMG/M16/M4 receiver. The fire control lever is engaged to the fire mode designated by agency practice and policy. The shooter's visual is directed to the threat area.

High threat cover – the SMG/M16/M4 is indexed to the shooter's shoulder, muzzle approximately eighty (80) to eighty-five (85) degrees to the ground. The shooter's trigger finger is off the trigger, extended along the SMG/M16/M4 receiver. The fire control lever is engaged to the fire mode designated by agency practice and policy. The SMG/M16/M4 sights are slightly below the shooter's line of sight. The shooter's visual is on the threat area.

Contact – the SMG/M16/M4 is indexed to the shooter's shoulder, muzzle approximately ninety (90) degrees toward the target, parallel to the ground. The fire control lever is engaged to the selected fire mode. The shooter's trigger finger is indexed on the trigger. The shooter's eye, SMG/M16/M4 sights, and target are aligned.

Operational magazine capacity – the SMG/M16/M4 magazines are generally available in five (5), ten (10), twenty (20), and thirty (30) round capacities. While lower round capacity magazines function reliably when charged to their full capacity, SMG/M16/M4 thirty (30) round capacity magazines may not function or seat in the SMG/M16/M4 magazine well when charged to full capacity. It is generally an accepted practice to charge thirty (30) round SMG/M16/M4 magazines with twenty-seven (27) to twenty-eight (28) rounds for reliable function. The agency conducting the SMG/M16/M4 qualification has the option to designate the number of rounds for the operational magazine capacity, according to agency policy and procedures.

Function check – an examination of the SMG/M16/M4 for bore obstructions and proper fire cycle operation.

I. DEFINITIONS (cont.)

Administrative unload – the process of engaging the fire control lever to "safe"; removing the magazine; engaging the charging handle; removing live rounds from the chamber; rendering the weapon to a completely non-firing mode while practicing firearms safety rules and procedures.

Engagement signal – this is the visual or auditory cue for the shooter to deliver fire to the target. The engagement signal will depend on the agency facility and range officer preference: whistle; target turning; electronic timer; verbal command; or other suitable directive.

Operational reload – the process of discharging an empty or non-functioning SMG/M16/M4 magazine from the magazine well and inserting an operationally charged magazine into the SMG/M16/M4 magazine well so the weapon is operational.

II. COURSE OF FIRE

Preparation

1. Range facility inspection – examine the range training area for potential safety hazards and non-essential personnel.
2. Safety briefing – advise shooters on firearms safety rules, range, weapon handling, and emergency procedures.
3. Course procedural briefing – advise shooters regarding the course of fire administration, operation, and range commands and signals.
4. Equipment inspection – function check SMG/M16/M4; sidearms; magazines; and weapon related equipment for proper operation, function, and safety.
5. Charge firearm magazines – charge each magazine to designated agency operational capacity. Each shooter must have at least two magazines; however, three magazines are recommended.
    a. STAGE 3 requires that the SMG/M16/M4 be loaded with a single chambered round and an empty magazine; shooters should also charge their sidearm magazines.
    b. Once the magazines are charged, shooters secure them in a magazine carrier. STAGE 6 requires the shooters' magazines to be stacked to a specific number and order. The instructor(s) can have the shooters prepare their magazines prior to the beginning of STAGE 6.
6. Administrative load
    a. Shooters load their sidearms according to the designated agency procedure and holster engaging all holster security devices.
    b. Shooters load the SMG/M16/M4, engage the fire control lever to safe or designated fire mode depending on agency preference, and index to low threat cover, ready to start at STAGE 1.
    c. The agency has the option to designate the fire control lever mode (safe or designated fire control mode) at the start of each stage.
7. Operational reloading – advise shooters that during the course of fire, maintaining firearms operational condition is the shooter's responsibility, but allow a reasonable amount of time between stages for shooters to reload.

II. COURSE OF FIRE (cont.)

1. Students administratively load sidearm and SMG/M16/M4 according to agency procedure.

2. All course of fire stages require the shooter to stand with weapons at a low threat cover position prior to engagement signal.

    a. Weapon muzzle indexed no more than a forty-five (45) degree angle to the ground.

    b. The fire control lever index is optional (safe or designated fire mode), according to agency procedure.

    c. The shooter's trigger finger must be indexed along the frame of the firearm.

3. During the course of fire, the shooter will not be penalized for firing more rounds than required provided:

    a. The overage rounds are fired inside the designated stage time frame.

    b. The rounds strike in the stage's designated target area.

4. The shooters must fire the minimum number of rounds at each stage.

5. Required performance level is eighty percent (80%).

    a. The maximum score for this course of fire is twenty-five (25) points.

    b. Shooters must score no less than twenty (20) points, (80%) to pass.

III. FIRE COURSE ADMINISTRATION

STAGE 1: range 10 feet; (3) three rounds; 2.0 seconds; full automatic fire mode

1. Index low threat cover.
2. On signal, engage the target preferred area a minimum of three (3) rounds in full automatic fire mode.
3. Index high threat cover, threat assessment.

STAGE 2: range 10 feet; (4) four rounds; 4.0 seconds; full automatic fire mode

1. Index low threat cover.
2. On signal, engage the target preferred area a minimum of three (3) rounds, full automatic fire mode.
3. Engage the head oval of the target a minimum of one (1) round, full automatic fire mode. The instructor has the option to designate a pelvic oval alternative if so desired. *This is an instructor option and not a shooter option.*
4. Index high threat cover, threat assessment.

At the completion of STAGE 2, the targets should be marked or scored for the head or pelvic oval shots to avoid scoring confusion at the end of the course of fire.

STAGE 3: range 15 feet; (3) three rounds; 6.0 seconds; full automatic fire mode

1. Prep the SMG/M16/M4, one (1) round chambered, and an empty magazine inserted into the magazine well.
2. Index low threat cover.
3. On signal, engage the target preferred area one (1) round with the SMG/M16/M4 to failure.
4. Transition to a sidearm and engage the target preferred area two (2) rounds.
5. Index sidearm high cover, threat assessment.

STAGE 4: range 20 feet; (3) three rounds 3.0 seconds; full automatic fire mode

1. Index SMG/M16/M4 low threat cover.
2. On signal, engage the target preferred area with a minimum of three (3) rounds in the full automatic fire mode.
3. Index high threat cover, threat assessment.

III. FIRE COURSE ADMINISTRATION (cont.)

STAGE 5: range 30 feet; (3) three rounds; 3.0 seconds; semiautomatic or full automatic fire mode, shooter option

1. Index low threat cover.
2. On signal, engage the target preferred area three (3) rounds, semiautomatic or full automatic fire mode, as the shooter has the option at this stage.
3. Index high threat cover, threat assessment.

STAGE 6: range 50 feet; (2) two rounds; 8.0 seconds; semiautomatic fire mode/non-dominant index

1. Transfer the SMG/M4/M16 to a non-dominant position.
2. Index low threat cover, non-dominant SMG/M4/M16 position.
3. On signal engage the target preferred area two (2) rounds, non-dominant shooting technique.
4. Index high threat cover, threat assessment.

STAGE 7: range 75 feet; (5) five rounds; 12.0 seconds; semiautomatic fire mode

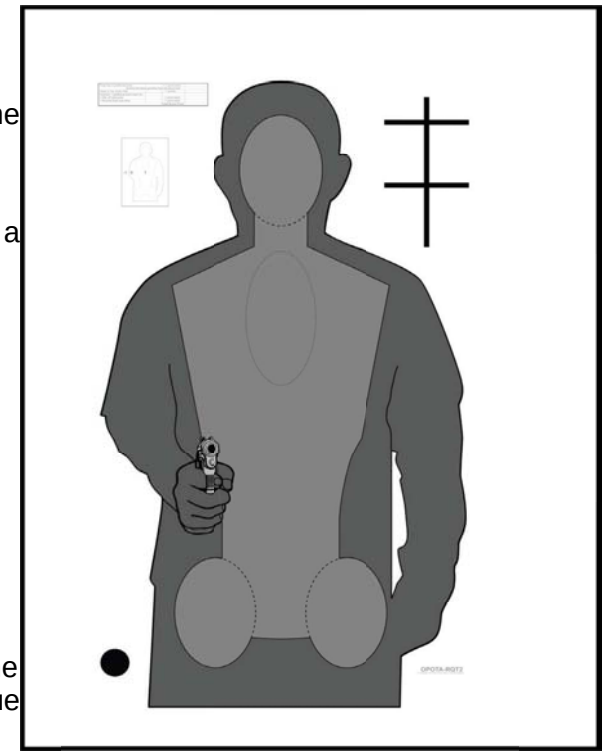
1. Prepare the SMG/M4/M16 with one (1) chambered round and a magazine loaded with a single round, two (2) rounds total.
2. Index low threat cover.
3. On signal, engage the target preferred area two (2) rounds to SMG/M4/M16 failure.
4. Assume a kneeling position.
5. Reload the SMG/M4/M16.
6. Engage the target preferred area three (3) rounds from a kneeling position.
7. Index high threat cover, threat assessment.

STAGE 8: range 150 feet; (2) two rounds; 8.0 seconds; semiautomatic fire mode

1. Index low threat cover, standing.
2. On signal, assume a prone shooting position.
3. Engage the target preferred area two (2) rounds.
4. Index high threat cover, threat assessment.

IV. COURSE OF FIRE SCORE COMPUTATION

OPOTC RQT-2 Target Point Values



1. Preferred area (light gray area of the target): a round striking in this area receives a value of one (1) point.
2. Outer silhouette area (dark gray area of the silhouette): a round striking in this area receives a value of zero (0).
3. Off silhouette: any round striking outside the RQT-2 target silhouette receives a value of negative one (-1) point.
4. Ovals (head and pelvic regions): some stages designate the oval as the only target area.
    a. When one of the ovals is designated as the exclusive target area, a round placed inside the designated oval receives a value of one (1) point.
    b. Should the required rounds strike outside the designated oval, each round receives a value of negative one (-1).
5. The highest obtainable score is twenty-five (25) points.

Procedural Point Deductions

1. Shooters may fire more rounds than the required minimum stages without any penalty points.
2. Should additional rounds strike in the preferred area, the shooter does not receive additional points for the rounds over the MAXIMUM POSSIBLE SCORE of twenty-five (25) points.
3. All “miss” rounds are calculated into the shooter’s score, regardless if fired as additional rounds or required rounds.
4. Procedural errors:
    a. Any rounds not fired receive a value of negative one (-1) point for each round not fired under the minimum required rounds.
    b. Round(s) fired outside designated time frame receive a value of minus one (-1) regardless if the round(s) are within the minimum rounds or over the minimum rounds necessary for the course.
5. It is the firearms instructors’ responsibility to determine whether a round was fired outside the designated time frame.

V. SCORING TERMINOLOGY

MAXIMUM POSSIBLE SCORE (MPS): This value is determined by the number of rounds necessary to complete the course of fire which is twenty-five (25) rounds. One (1) point for each round fired into the scoring area results in a maximum score of twenty-five (25) points. The MAXIMUM POSSIBLE SCORE (MPS) value is always 25 points.

TOTAL MISS (TM): This is the total number misses that appear on the target determined by adding negative one (-1) point value misses and the zero (0) value misses. The value of the misses is not factored into TOTAL MISS (TM), only the total number of combined misses.

SHOOTER MAXIMUM SCORE (SMS): This value is determined by subtracting the TOTAL MISS (TM) value from the MAXIMUM POSSIBLE SCORE (MPS) value. The value awarded to the shooter can never be greater than the MAXIMUM POSSIBLE SCORE (MPS) value of twenty-five (25) points.

SHOOTER TOTAL HIT (STH): This value is determined by counting the actual number of hits appearing on the target and awarding one (1) point for each hit. The value can be less than twenty-five (25) points, equal to twenty-five (25) points, or greater than twenty-five (25) points depending on the number of rounds the shooter has selected to engage the target.

SHOOTER RAW SCORE (SRS): This value can never be greater than the SHOOTER MAXIMUM SCORE (SMS); however, the value can be less if the shooter fires less than the minimum required rounds.

> If the SHOOTER TOTAL HIT (STH) value is equal to or greater than the MAXIMUM SHOOTER SCORE (MSS) value, the SHOOTER MAXIMUM SCORE (SMS) value is assigned as the SHOOTER RAW SCORE (SRS).
>
> If the SHOOTER TOTAL HIT (STH) value is less than the SHOOTER MAXIMUM SCORE (SMS), then the SHOOTER TOTAL HITS (STH) value is assigned as the SHOOTER RAW SCORE (SRS) value.

ROUND NOT FIRED (RNF): The number of rounds the shooter failed to fire under the required minimum number of rounds for the course of fire.

MISS DEDUCTION (MD): This value is determined by adding the negative one (-1) point miss values.

ROUND DEDUCTION (RD): This value is determined by assigning a negative one (-1) point value for each ROUND NOT FIRED (RND).

PENALTY DEDUCTION (PD): This value is determined by assigning a negative one (-1) point value for each observed round(s) fired outside the designated time frame.

SHOOTER FINAL SCORE (SFS): This score is determined by subtracting the MISS DEDUCTION (MD); ROUND DEDUCTIONS (RD); and PENALTY ROUND (PR) values from the SHOOTER RAW SCORE (SRS) value.

VI. SCORING PROCEDURE

1. Count all (-1) misses.

2. Count all (0) misses.

3. Add (-1) misses and (0) misses, but do not apply the deduction scores, total number of misses only to determine the TOTAL MISS (TM) value.

$$TM = M(-1) + M(0)$$

4. Subtract the TOTAL MISS (TD) value from the MAXIMUM POSSIBLE SCORE (MPS) which is twenty-five (25) to determine the SHOOTER MAXIMUM SCORE (SMS).

$$SMS = 25 - TM$$

5. Count the number of hits to determine the SHOOTER TOTAL HIT (STH) value.

   If the SHOOTER TOTAL HIT (STH) value is equal or greater than the SHOOTER MAXIMUM SCORE (SMS), then the SHOOTER TOTAL HIT (STH) value is assigned as the SHOOTER RAW SCORE (SRS) value.

   If the SHOOTER TOTAL HITS (STH) value is less than the SHOOTER MAXIMUM SCORE (SMS) value, then the SHOOTER MAXIMUM SCORE (SMS) value is assigned as the SHOOTER RAW SCORE (SRS) value.

6. Determine the ROUND NOT FIRED (RNF) value by adding the SHOOTER TOTAL HITS (STH) and the TOTAL MISS values.

   If the sum is twenty-five (25) or greater, the shooter fired the minimum required rounds.

   If the sum is less than twenty-five (25), the shooter did not fire the number of required rounds. Subtract the sum from twenty-five (25) to determine the ROUND NOT FIRED (RNF) value.

7. Determine the MISS DEDUCTION (MD) by assigning a negative one (-1) point value to each of the determined number of MISS (-1) values.

$$MD = MISS(-1) \times -1$$

8. Determine the ROUND DEDUCTION (RD) by assigning a negative one (-1) point value to each ROUND NOT FIRED (RNF).

$$RD = RNF \times -1$$

9. Determine the PENALTY DEDUCTION (PD) by assigning a negative one (-1) point value for each observed procedural error during the course of fire.

VI. SCORING PROCEDURE (cont.)

10. Subtract MISS DEDUCTION (MD), ROUND DEDUCTION (RD) and PENALTY DEDUCTION (PD) values from the SHOOTER RAW SCORE (SRS) to determine the SHOOTER FINAL SCORE.

SFS = SRS - MD – PD

SCORE COMPUTATION EXAMPLES: The MAXIMUM POSSIBLE SCORE (MPS) is 25 points.

Shooter A: TM is zero (0). AMS is 25. STH is 25. As the SMS is 25, then the SRS is then 25. RND is zero (0). Factoring MD, RD, and PD with the SRS the SHS is 25.

Shooter B: Totaling MISS (-1) and MISS (0) results in three (3) for the TM. Subtracting TM from MPS results in SMS (22). STH is 24 so the SMS determines the SRS (22). RNF is zero (0). Factoring MD (-2) into the SRS (22) results in the SFS (20).

EXAMPLE	A	B	C	D	E	F	G
MAXIMUM POSSIBLE SCORE (MPS)	25	25	25	25	25	25	25
MISS (-1):	0	2	2	0	0	0	1
MISS (0):	0	1	1	0	0	0	1
TOTAL MISS (TM):	0	3	3	0	0	0	2
SHOOTER MAXIMUM SCORE (SMS):	25	22	22	25	25	25	23
SHOOTER TOTAL HITS (STH):	25	24	21	27	24	28	27
SHOOTER RAW SCORE (SRS):	25	22	21	25	24	25	23
ROUND NOT FIRED (RNF):	0	0	1	0	1	0	0
MISS DEDUCTIONS (MD):	0	-2	-2	0	0	0	-1
ROUND DEDUCTION (RD):	0	0	-1	0	-1	0	0
PENALTY DEDUCTIONS (PD):	0	0	-1	0	-1	-1	22
SHOOTER FINAL SCORE (SFS):	25	20	17	25	23	24	22

Shooter C: MISS (-1) = two plus MISS (0) = one. TM = three. MPS (25) minus TM (3) equals SMS, (22). During the course of fire, the shooter fired one (1) round outside the required time frame resulting in a one (1) point PD. STH is 21. STH (21) is less than the SMS (22) so STH becomes the SRS (21). MPS (25) minus TM minus STH equals 1 (one). SRS (21) minus MD (2) minus PD (1) equals SFS (17).

Shooter D: TM equals zero (0). MSS is 25. STH is 27 which is greater than the MPS so the SRS is 25. No MD's, RD's or PD's so the SFS is 25.

Shooter E: TM equals zero (0). During the course of fire, the shooter fired one (1) round outside the designated time frame resulting in a negative point (-1) PD. SMS is then 25. STH is 24. Since the STH is less than the SMS, the SRS is 24. MPS (25) minus STH (24) equals RND (1) resulting in a negative one (-1) point RD. Factoring in SRS, MD, RD, and PD results in an SFS of 23.

Shooter F: TM equals zero (0). SMS is then 25. Since the STH (27) is more than the SMS (28), the SRS then is 25. There is no RNF value. One (1) round was observed over the designated time frame during the course of fire resulting in a negative one (-1) point PD. Factoring SRS, MD, RD, PD values results in a SFS of 24.

VI. SCORING PROCEDURE (cont.)

Shooter G: One MISS (-1) plus One MISS (0) equals Two TM. MPS (25) minus TM (2) equals SMS (23). STH is 27 higher than the SMS (23), so the SMS (23) becomes the SRS (23). The shooter fired more than the minimum rounds so there is no RNF value. Factoring SRS, MD, (-1) miss and one (0) miss for a total of two (2) misses. Factoring MPS with TM makes the MSS equal 23. Since the STH is 27, greater than 23, the SRS becomes 23. Factoring SRS (23) and MD (-1) results in an SFS of 22.

VII. SCORE CALCULATION

STAGE	RANGE	RNDS	TIME	PROCEDURE
1	10 FT	3	2 SEC	On signal, engage the target full automatic, minimum three round burst.
2	10 FT	4	4 SEC	On signal, engage the target full automatic, minimum three round burst, then engage the head oval one round.
3	15 FT	3	6 SEC	Prep the SMG/M16/M4, one round chambered and empty magazine. On signal, engage the target one round with SMG/M16M4 to failure, transition to sidearm and engage the target two rounds.
4	20 FT	3	3 SEC	Engage target full automatic, minimum three round burst.
5	30 FT	3	3 SEC	Engage target three rounds, full automatic or semiautomatic fire control mode, shooter's option.
6	50 FT	2	8 SEC	Transfer the SMG/M16/M4 to the non-dominant shoulder. On signal, engage the target two rounds, semiautomatic fire control mode.
7	75 FT	5	12 SEC	Prep the SMG/M16/M4, one chambered round, one round in the magazine. On signal, engage the target two rounds to failure, assume a kneeling position, reload and engage the target three rounds, semiautomatic fire control mode.
8	150FT	2	8 SEC	On signal, assume a prone shooting position, engage the target two rounds semiautomatic fire, semiautomatic fire control mode.
TOTAL		**25**		
MINIMUM: 80%		**20**		

.223 55 GR FMJ PATH FOR 25 AND 50 YARD ZERO									
RANGE	0 YD	25 YD	50 YD	75 YD	100 YD	125 YD	150 YD	175 YD	200 YD
25 YD PATH	-2.7"	0.0"	2.44"	4.61"	6.2"	6.1"	5.9"	5.5"	5"
50 YD PATH	-2.7"	-1.22"	0.0"	0.94"	1.59"	1.92"	1.92"	1.54"	0.77"

9mm 115 GR FMJ PATH FOR 25 AND 50 YARD ZERO									
RANGE	0 YD	25 YD	50 YD	75 YD	100 YD	125 YD	150 YD	175 YD	200 YD
25 YD PATH	-2.75"	0.0"	1.9"	0.03"	-3.07"	-8.47"	-16.34"	-26.85"	-40.17"
50 YD PATH	-2.75"	-0.49"	0.0"	-1.46"	-5.05"	-10.94"	-19.31"	-30.31"	-44.12"

.40 S&W 180 GR HYDROSHOCK PATH FOR 25 AND 50 YARD ZERO									
RANGE	0 YD	25 YD	50 YD	75 YD	100 YD	125 YD	150 YD	175 YD	200 YD
25 YD PATH	-2.75"	0.0"	1.9"	-1.49"	-5.96"	-13.07"	-22.94"	-35.69"	-51.43"
50 YD PATH	-2.75"	-0.23"	0.0"	-2.18"	-6.88"	-14.22"	-24.32"	-37.3"	-53.27"

VIII. SMG/M16/M4 QUALIFICATION RECORD

AGENCY:	RANGE:	DATE:

SHOOTER	MPS 25	MISS (-1)	MISS (-0)	TM	SMS	STH	SRS	RNF	MD	RD	PD	SFS

INSTRUCTOR:	OPOTC INSTRUCTOR NUMBER:	DATE:
INSTRUCTOR SIGNATURE:	AGENCY:	

INSTRUCTOR:	OPOTC INSTRUCTOR NUMBER:	DATE:
INSTRUCTOR SIGNATURE:	AGENCY:	

IX. INDIVIDUAL FIREARMS QUALIFICATION RECORD

OFFICER:	DATE:
AGENCY:	RANGE:

SEMIAUTOMATIC PISTOL MANUFACTURER:			COURSE OF FIRE:	
MODEL:	CALIBER:	SERIAL NUMBER:	SCORE:	INSTRUCTOR:

SEMIAUTOMATIC PISTOL MANUFACTURER:			COURSE OF FIRE:	
MODEL:	CALIBER:	SERIAL NUMBER:	SCORE:	INSTRUCTOR:

REVOLVER MANUFACTURER:			COURSE OF FIRE:	
MODEL:	CALIBER:	SERIAL NUMBER:	SCORE:	INSTRUCTOR:

SHOTGUN MANUFACTURER:			COURSE OF FIRE:	
MODEL:	CALIBER:	SERIAL NUMBER:	SCORE:	INSTRUCTOR:

RIFLE/CARBINE MANUFACTURER:			COURSE OF FIRE:	
MODEL:	CALIBER:	SERIAL NUMBER:	SCORE:	INSTRUCTOR:

SMG MANUFACTURER:			COURSE OF FIRE:	
MODEL:	CALIBER:	SERIAL NUMBER:	SCORE:	INSTRUCTOR: