EXW Course Fleet Laboratory Manual (v2.2)

Applied Field Methods, 9-Box Digital Tool Kit (exwtoolkit.com) & The Four-Part Submission Standard

$0 ZTC OER • EN / ES

In Plain English (Reading Navigation Guide):
Before you read the details below, here is the short version: **The EXW Digital Tool Kit (`exwtoolkit.com`) is your free online clinical calculator shared across all five courses in the EXW degree program (`EXW 101` , `EXW 150` , `EXW 210` , `EXW 245` , and `EXW 265`).**
En Palabras Sencillas (Norteño): Piense en `exwtoolkit.com` como la caja de herramientas digital oficial de toda la carrera de EXW aquí en AWC: usamos la misma plataforma en línea y en el laboratorio para que usted la domine al cien.

1. Course-by-Course Modality, Federal SSoT & 9-Box Operational Matrix

Course	Delivery Modality	Canonical Single Source of Truth (SSoT)	Primary `exwtoolkit.com` Boxes
EXW 101 Concepts of Kinesiology	100% Online Asynchronous	**PAGA 2018 (2nd Ed.):** Physical Activity Guidelines for Americans	Safety, Cardio, Strength (Push/Pull/Hinge/Squat), Biometrics, Recovery, Solve
EXW 150 Nutrition for Exercise & Sport	100% Online Asynchronous	**2025–2030 Dietary Guidelines for Americans** (“Real Food” Focus)	Fuel (RMR, BMR, TDEE, Macros), Biometrics, Recovery (Sweat/Electrolytes), Safety, Solve
EXW 210 Personal Fitness Training	Hybrid Onsite (AS 115 & GY 116)	**SSoT Triad:** PAGA 2018 + ACSM 12th Ed. (2025) + **NASM OPT Model**	All 9 Operational Boxes (Biometrics, Engine, Fuel, Safety, Strength, Cardio, Recovery, Flexibility, Solve)
EXW 245 Exercise Testing & Prescription	Clinical Testing Lab (GY 116)	**ACSM Guidelines for Exercise Testing & Prescription (12th Ed., 2025)**	Safety (ACSM Ch. 2), Biometrics, Engine (GXT, Ergometry, VO2max), Cardio (HRR/METs), Solve
EXW 265 Exercise for Special Populations	100% Online Asynchronous	**PAGA 2018 (2nd Ed.), Chapters 5 & 6** (Older Adults & Chronic Conditions)	Safety (Contraindications & Referral Gates), Biometrics, Cardio (RPE/Talk Test), Strength/Balance, Solve

2. The 9 Operational Boxes of `exwtoolkit.com`

- **01 / Biometrics Box:** Computes BMI, Waist-to-Hip Ratio (WHR), and resting hemodynamic classifications per ACSM standards.

- **02 / Engine Box:** Processes Rockport 1-Mile Walk, Cooper 12-Minute Run, and submaximal cycle ergometry to estimate VO_2max.
- **03 / Fuel Box:** Calculates Mifflin-St Jeor RMR, TDEE, and macronutrient/electrolyte budgets aligned with DGA 2025–2030 (“Real Food”).
- **04 / Safety Box:** Evaluates PAR-Q+ screening, ACSM Ch. 2 medical clearance gates, and Yuma / Imperial Valley Wet-Bulb Globe Temperature (WBGT) thermal stress thresholds.
- **05 / Strength Box:** Tracks multi-planar movement baselines across the 4 foundational pillars: Push, Pull, Hinge, and Squat.
- **06 / Cardio Box:** Computes Karvonen Heart Rate Reserve (HRR), MET targets, and RPE / Talk Test training zones.
- **07 / Recovery Box:** Audits sleep architecture, HRV, hydration/sweat-loss replacement (16–24 oz fluid per pound lost), and readiness.
- **08 / Flexibility Box:** Evaluates sit-and-reach, shoulder mobility, and functional Range of Motion (ROM) benchmarks.
- **09 / Solve Box:** Compiles FITT-VP prescriptions, NASM OPT phase parameters, and cryptographic verification tokens for Canvas submission.

3. The Clinical Framing Protocol & Four-Part Submission Standard (10-7-0 Scale)

Every laboratory assignment is evaluated on the **10-7-0 Mastery Grading Scale** (`10/10 Exemplary` , `7/10 Competent — Revise for 10/10` , `0/10 Recalibrate & Resubmit`) using the **Clinical Framing Protocol (`Pattern / Rule / Solve` — Spanish: `Patrón / Regla / Solución`)**:

1. **Part 1 (The Engine — P-T-C-F Prompt):** Engineered Persona, Task, Context, and Format prompt with `###CASE_DATA_START###` delimiters.
2. **Part 2 (The Clinical Audit):** 150-word critique of the AI calculation against the course’s Federal/Clinical Source of Truth.
3. **Part 3 (Active Verification — The “Why” Check):** Mandatory 150-word defense in the student’s own voice explaining why the prescription protects the client in Yuma / Imperial Valley conditions.
4. **Part 4 (The 10/10 Exemplar & Pre-Submission Clinical Auditor Check):** Self-audit using the embedded Canvas **EXW Clinical Auditor** modal prior to final submission.

Author: Alan Pruitt (“Coach Alan”), Exercise Science & Wellness Faculty, Arizona Western College

License: CC BY-NC-SA 4.0 • exwtoolkit.com • alanpruitt.com