# Arizona Western College — WPE Novel 100-Level EXW Curriculum Proposal Portfolio

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**Governing Policies:** AWC Procedures 615.3 (ACRES), 601.3 (800 Min/Credit), 601.1 (Load), 615.2 (Assessment), & AWC Academic Program Learning Outcomes Rubric

**In Plain English:** Before you read the course blueprints below, here is the short version: **I designed four new, zero-prerequisite, 3-credit 100-level EXW courses (EXW 110, 120, 130, 160) and two turnkey modernization blueprints for our Semester 1 and Semester 2 pathway anchors (EXW 100 and EXW 212).** Every course uses 100% free federal textbooks (PAGA 2018, DGA 2025–2030, ACSM 12th Ed.) plus our free `exwtoolkit.com` clinical simulator, and slots directly into the **AA.EXWN 9-Credit Emphasis Area pre-registration block** alongside EXW 150 and EXW 265.

## 1. How This Portfolio Solves the AA.EXWN 4-Semester Pre-Registration Bottleneck

| AA.EXWN Term | Advisement Checksheet Requirement | Current Online EXW Fleet | Added by This WPE Proposal Portfolio |
|---|---|---|---|
| **Semester 1** | Required Major Course (3 Cr) | *Legacy EXW 100 shell* | **EXW 100: Health and Wellness (3 Cr)** — Turnkey 16-Mod PAGA + DGA 2025–2030 Blueprint (Zero CRC wait) |
| **Semester 2** | Required Major Courses (6 Cr) | **EXW 101: Concepts of Kinesiology (3 Cr)** | **EXW 212: Exercise Science (3 Cr)** — Turnkey 16-Mod ACSM 12th Ed. + NASM Blueprint (Zero CRC wait) |
| **Semesters 3 & 4** | **Emphasis Area Selections #1, #2, #3 (9 Credits Total = Three 3-Cr Courses)** | **EXW 150 (3 Cr)** + **EXW 265 (3 Cr)** = 6 of 9 Credits in both Emphasis Areas | **Completes Credits 7–9 in BOTH AA.EXWN Emphasis Areas:**<br>• **EXW 110** (Desert Heat & Hydration, 3 Cr)<br>• **EXW 120** (Functional Movement & Corrective, 3 Cr)<br>• **EXW 130** (Whole-Food Bioenergetics, 3 Cr)<br>• **EXW 160** (Clinical AI & Wearable Biometrics, 3 Cr) |

## 2. Turnkey ACRES Course Proposals & Pathway Anchor Blueprints (PREREQUISITE: None)

**EXW 110 (3 CR / 3 LEC / 0 LAB)** — **NOVEL 100 LEVEL PROPOSAL**

### EXW 110: Heat Physiology, Hydration, and Occupational Wellness in the Desert Southwest

**Catalog Description:** Applies human thermoregulation, fluid-electrolyte balance, heat acclimatization, and whole-food nutritional bioenergetics to physical activity, sport, and outdoor occupational performance in extreme desert environments. Designed for students in exercise science, athletics, agriculture, public safety, and allied health.

**Prerequisite:** None | **Contact Time (Proc. 601.3):** 2,880 min provided (2,400 min required) | **OER SSoT:** Physical Activity Guidelines for Americans (PAGA), 2nd Edition (2018) & 2025–2030 Dietary Guidelines for Americans ('Real Food' & Hydration Focus)

**Academic Pathway Checksheet Slots:** AA.EXWN (Exercise, Wellness and Nutrition A.A., 64 Cr) — Add to BOTH Emphasis Area 1 (Fitness & Exercise, 9 Cr) and Emphasis Area 2 (Health & Fitness, 9 Cr) in Semesters 3 & 4 alongside EXW 150 and EXW 265.; AA.PHSED (Physical Education A.A., 67 Cr) — Add to Recommended General Electives (6 Cr pool, Semesters 2 & 4).

- **Comp 1:** Analyze human thermoregulatory mechanisms and physiological responses to exertional heat stress in arid environments.
- **Comp 2:** Calculate individualized sweat rates, fluid deficits, and electrolyte replacement protocols for athletic and occupational cohorts.
- **Comp 3:** Evaluate signs, symptoms, and emergency risk-mitigation protocols for Exertional Heat Illness (EHI).
- **Comp 4:** Design culturally grounded, bilingual-accessible occupational and community desert wellness interventions.

**EXW 120 (3 CR / 3 LEC / 0 LAB)** — **NOVEL 100 LEVEL PROPOSAL**

### EXW 120: Functional Movement, Mobility, and Corrective Exercise Foundations

**Catalog Description:** Introduces human movement screening, static and dynamic postural assessment, joint mobility, core and neuromuscular stabilization, and the four-phase corrective exercise continuum (Inhibit, Lengthen, Activate, Integrate). Prepares students to identify common movement compensations and design safe stabilization programs.

**Prerequisite:** None | **Contact Time (Proc. 601.3):** 2,880 min provided (2,400 min required) | **OER SSoT:** National Academy of Sports Medicine (NASM) Optimum Performance Training (OPT) Model & Physical Activity Guidelines for Americans (PAGA), 2nd Edition (2018)

**Academic Pathway Checksheet Slots:** AA.EXWN (Exercise, Wellness and Nutrition A.A., 64 Cr) — Add to BOTH Emphasis Area 1 (Fitness & Exercise, 9 Cr) and Emphasis Area 2 (Health & Fitness, 9 Cr) in Semesters 3 & 4.; AA.PHSED (Physical Education A.A., 67 Cr) — Add to Recommended General Electives (6 Cr pool).

- **Comp 1:** Analyze kinetic chain checkpoints, muscle force-couples, and length-tension relationships during human movement.
- **Comp 2:** Conduct static posture and dynamic movement assessments to identify muscle imbalances.
- **Comp 3:** Apply the four-phase Corrective Exercise Continuum (Inhibit, Lengthen, Activate, Integrate) to movement compensations.
- **Comp 4:** Design NASM OPT Phase 1 Stabilization Endurance and PAGA multicomponent mobility programs.

**EXW 130 (3 CR / 3 LEC / 0 LAB)** **NOVEL 100 LEVEL PROPOSAL**

### EXW 130: Whole-Food Bioenergetics, Metabolic Health, and Culinary Wellness

**Catalog Description:** Examines human bioenergetics, insulin sensitivity, gut-metabolic health, and practical culinary wellness grounded in the 2025–2030 Dietary Guidelines for Americans ('Real Food' Focus). Emphasizes auditing ultra-processed foods, calculating energy and nutrient density, and formulating culturally authentic, budget-accessible whole-food nutrition plans.

**Prerequisite:** None | **Contact Time (Proc. 601.3):** 2,880 min provided (2,400 min required) | **OER SSoT:** 2025–2030 Dietary Guidelines for Americans ('Real Food' Focus) & Physical Activity Guidelines for Americans (PAGA), 2nd Edition (2018)

**Academic Pathway Checksheet Slots:** AA.EXWN (Exercise, Wellness and Nutrition A.A., 64 Cr) — Add to BOTH Emphasis Area 1 (Fitness & Exercise, 9 Cr) and Emphasis Area 2 (Health & Fitness, 9 Cr) in Semesters 3 & 4.; AS.NTR (Nutrition and Wellness A.S., 60 Cr) — Add to Other Departmental Requirements (12 Cr pool).

- **Comp 1:** Differentiate nutrient-dense whole foods from ultra-processed formulations using the 2025–2030 Dietary Guidelines for Americans.
- **Comp 2:** Calculate resting metabolic rate (RMR), Total Daily Energy Expenditure (TDEE), and macronutrient targets for metabolic health.
- **Comp 3:** Analyze the synergistic effects of post-prandial physical activity and whole-food nutrition on glycemic control and cardiometabolic risk.
- **Comp 4:** Design culturally authentic, budget-conscious borderland whole-food meal plans and bilingual client education artifacts.

**EXW 160 (3 CR / 3 LEC / 0 LAB)** **NOVEL 100 LEVEL PROPOSAL**

### EXW 160: Clinical AI, Wearable Biometrics, and Digital Health Literacy in Kinesiology

**Catalog Description:** Trains students as Clinical Architects who interpret wearable biometric telemetry (heart rate variability, resting heart rate, estimated VO2max, step/cadence actigraphy, sleep stages, and continuous glucose trends) and critically audit Artificial Intelligence (AI) health and exercise outputs against federal clinical guidelines using the Pattern / Rule / Solve protocol.

**Prerequisite:** None | **Contact Time (Proc. 601.3):** 2,880 min provided (2,400 min required) | **OER SSoT:** Physical Activity Guidelines for Americans (PAGA), 2nd Edition (2018), 2025–2030 Dietary Guidelines for Americans, & ACSM 12th Edition (2025)

**Academic Pathway Checksheet Slots:** AA.EXWN (Exercise, Wellness and Nutrition A.A., 64 Cr) — Add to BOTH Emphasis Area 1 (Fitness & Exercise, 9 Cr) and Emphasis Area 2 (Health & Fitness, 9 Cr) in Semesters 3 & 4.; AA.PHSED (Physical Education A.A., 67 Cr) — Add to Recommended General Electives (6 Cr pool).

- **Comp 1:** Interpret consumer and clinical wearable biometric telemetry across cardiorespiratory, autonomic, and movement domains.
- **Comp 2:** Engineer structured clinical prompts (P-T-C-F) with privacy-preserving case delimiters (###).
- **Comp 3:** Audit AI-generated exercise and nutrition prescriptions for clinical hallucinations and safety gate violations.
- **Comp 4:** Formulate human-verified clinical interventions and bilingual patient education cards using Pattern / Rule / Solve.

**EXW 100 (3 CR / 3 LEC / 0 LAB)** **EXISTING PATHWAY ANCHOR TURNKEY BLUEPRINT**

### EXW 100: Health and Wellness (Semester 1 AA.EXWN / AS.NTR / WECO2 Pathway Anchor)

**Catalog Description:** A survey of the dimensions of wellness including physical fitness, nutrition, weight management, stress management, substance abuse prevention, chronic disease prevention, and personal health behavior change.

**Prerequisite:** None | **Contact Time (Proc. 601.3):** 2,880 min provided (2,400 min required) | **OER SSoT:** Physical Activity Guidelines for Americans (PAGA), 2nd Edition (2018) & 2025–2030 Dietary Guidelines for Americans ('Real Food' Focus)

**Academic Pathway Checksheet Slots:** AA.EXWN (Exercise, Wellness and Nutrition A.A., 64 Cr) — ALREADY REQUIRED in Semester 1 (3 Cr).; AS.NTR (Nutrition and Wellness A.S., 60 Cr) — ALREADY REQUIRED in Semester 1 (3 Cr).

- **Comp 1:** Evaluate the multidimensional model of wellness and behavior-change strategies across the lifespan.
- **Comp 2:** Apply PAGA 2nd Edition (2018) physical activity guidelines to cardiorespiratory, muscular, and mobility health.
- **Comp 3:** Apply the 2025–2030 Dietary Guidelines for Americans ('Real Food' Focus) to daily nutrition and metabolic health.
- **Comp 4:** Analyze stress management, sleep hygiene, substance-use risk reduction, and chronic disease prevention.

**EXW 212 (3 CR / 3 LEC / 0 LAB)** **EXISTING PATHWAY ANCHOR TURNKEY BLUEPRINT**

### EXW 212: Exercise Science (Semester 2 AA.EXWN / AA.PHSED / CERT.FTPR Pathway Anchor)

**Catalog Description:** Examines physiological, biomechanical, and bioenergetic principles of human movement and exercise. Topics include skeletal muscle physiology, ATP bioenergetic pathways, cardiorespiratory and endocrine responses to exercise, thermoregulation, and training adaptations.

**Prerequisite:** None | **Contact Time (Proc. 601.3):** 2,880 min provided (2,400 min required) | **OER SSoT:** ACSM's Guidelines for Exercise Testing and Prescription, 12th Edition (2025) & Physical Activity Guidelines for Americans (PAGA), 2nd Edition (2018)

**Academic Pathway Checksheet Slots:** AA.EXWN (Exercise, Wellness and Nutrition A.A., 64 Cr) — ALREADY REQUIRED in Semester 2 alongside EXW 101 (3 Cr).; AA.PHSED (Physical Education A.A., 67 Cr) — ALREADY REQUIRED in Semester 2 (3 Cr).

- **Comp 1:** Analyze human bioenergetic pathways (ATP-PCr, Glycolytic, and Oxidative) across exercise intensities and durations.
- **Comp 2:** Evaluate neuromuscular anatomy, sliding-filament mechanics, and motor-unit recruitment during muscular contraction.
- **Comp 3:** Calculate acute cardiorespiratory, hemodynamic, and endocrine responses and chronic adaptations to training.
- **Comp 4:** Apply biomechanical lever systems, torque, and training principles (SAID, Overload, Periodization) to exercise prescription.