Peck Conference Room

Risk Management Center (RMC) Western Division

4th floor at 12596 West Bayaud Ave,

Lakewood, Colorado

**Coordinator:**

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**Instructors:**

Barry Bunch, ERDC-EL

Zhonglong Zhang, Portland State University

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Isaac Mudge, USACE New Orleans District / ERDC-EL

Billy Johnson, LimnoTech

Lauren Melendez, ERDC-EL

Andy Goodwin, ERDC-EL

Day 1: July 18th, 0830 – 1630

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| **Activity** | **Times** |
| * Lecture 1.01: Introduction (course overview, and introductions) | 0830 - 0930 |
| BREAK | 15min |
| * Lecture 1.02: Introduction to Modeling | 0900 - 1045 |
| BREAK | 15min |
| * Lecture 1.03: Hydrodynamics modeling * Lecture 1.04: Temperature modeling | 1100-1200 |
| LUNCH | 1200-1330 |
| * Lecture 1.05: Water quality modeling * Lecture 1.06: New Features in V5.0 | 1330-1430 |
| BREAK | 15min |
| * Workshop 1.07: Software Setup * Lecture 1.08: Model Setup I * Case Study 1.09: Model Setup I | 1445-1615 |
| Questions and Discussion | 1615-1630 |

Day 2: July 19th, 0830 - 1630

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| **Activity** | **Times** |
| * Lecture 2.01: Model Grid * Case Study 2.02:Model Grid | 0830 - 0930 |
| BREAK | 15min |
| * Lecture 2.03: Model Output * Lecture 2.04: Model Setup II | 0945 - 1045 |
| BREAK | 15min |
| * Case Study 2.05: Model Setup II * Lecture 2.06: Water Temperature * Case Study 2.07: Water Temperature | 1100 – 1200 |
| LUNCH | 1200 - 1330 |
| * Lecture 2.08: Dissolved Oxygen * Case Study 2.09: Dissolved Oxygen * Lecture 2.10: Total Dissolved Gas * Case Study 2.11: Total Dissolved Gas | 1330 - 1430 |
| BREAK | 15min |
| * Lecture 2.1: Model utilities * Workshop 2.1: Model utilities | 1445 – 1545 |
| BREAK | 15min |
| Questions and Discussion | 16:00 - 1630 |

Day 3: July 20th, 0830 – 1630

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| **Activity** | **Times** |
| * Special Topics 3.01: Near Term Fish Prediction * Lecture 3.02: Calibration and Validation | 0830 - 0930 |
| BREAK | 15min |
| * Workshop 3.03: Calibration and Validation * Lecture 3.04: Adding Ports to a Dam * Workshop 3.05: Adding Ports to a Dam | 0945 – 1045 |
| BREAK | 15min |
| * Workshop 3.05: Adding Ports to a Dam (continued) * Lecture 3.06: Selective Withdrawal | 1100 – 1145 |
| LUNCH | 1145 – 1330 |
| * Workshop 3.07: Selective Withdrawal * Workshop 3.08: Upgrade to V5.0 | 1330 - 1430 |
| BREAK | 15min |
| * Special Topics: 3.09 The W2 Animator (W2Anim): a visualization and post-processing tool for CE-QUAL-W2 | 1445-1515 |
| Questions and Discussion and Course Closeout | 1515 - 1630 |