

# KIN R146B: WEIGHT TRAINING AND CONDITIONING II

**Originator**  
dfrehlich

**College**

Oxnard College

**Discipline (CB01A)**

KIN - Kinesiology

**Course Number (CB01B)**

R146B

**Course Title (CB02)**

Weight Training and Conditioning II

**Banner/Short Title**

Weight Training & Condition II

**Credit Type**

Credit

**Start Term**

Fall 2021

**Formerly**

PE R150B - Weight Training/Condition II

**Catalog Course Description**

This course builds upon goals established in Weight Training and Conditioning I to progress performance in cardiovascular conditioning, power lifting, weight loss, and endurance building. The course will incorporate the use of bodyweight exercises, kettlebells, medicine balls, and resistance bands as students learn to plan and execute a cardio-strength training program. Students will also learn to apply the principle of progressive overload to design and adapt a cardiovascular endurance training program and how to design a well-rounded muscular strength training program. The application of concepts of nutrition to meal planning for pre-workout, post-workout, and performance enhancement will also be covered in this course.

**Taxonomy of Programs (TOP) Code (CB03)**

0835.00 - Physical Education

**Course Credit Status (CB04)**

D (Credit - Degree Applicable)

**Course Transfer Status (CB05) (select one only)**

A (Transferable to both UC and CSU)

**Course Basic Skills Status (CB08)**

N - The Course is Not a Basic Skills Course

**SAM Priority Code (CB09)**

E - Non-Occupational

**Course Cooperative Work Experience Education Status (CB10)**

N - Is Not Part of a Cooperative Work Experience Education Program

**Course Classification Status (CB11)**

Y - Credit Course

**Educational Assistance Class Instruction (Approved Special Class) (CB13)**

N - The Course is Not an Approved Special Class

**Course Prior to Transfer Level (CB21)**

Y - Not Applicable

**Course Noncredit Category (CB22)**

Y - Credit Course

**Funding Agency Category (CB23)**

Y - Not Applicable (Funding Not Used)

**Course Program Status (CB24)**

1 - Program Applicable

**General Education Status (CB25)**

Y - Not Applicable

**Support Course Status (CB26)**

N - Course is not a support course

**Field trips**

Will not be required

**Grading method**

Letter Graded

**Alternate grading methods**

Student Option- Letter/Pass  
Pass/No Pass Grading

**Does this course require an instructional materials fee?**

No

**Repeatable for Credit**

No

**Is this course part of a family?**

No

**Units and Hours**

**Carnegie Unit Override**

No

**In-Class**

**Lecture**

**Activity**

**Laboratory**

**Minimum Contact/In-Class Laboratory Hours**

52.5

**Maximum Contact/In-Class Laboratory Hours**

52.5

**Total in-Class**

**Total in-Class**

**Total Minimum Contact/In-Class Hours**

52.5

**Total Maximum Contact/In-Class Hours**

52.5

**Outside-of-Class****Internship/Cooperative Work Experience**

Paid

Unpaid

**Total Outside-of-Class**

Total Outside-of-Class

**Total Student Learning**

Total Student Learning

**Total Minimum Student Learning Hours**

52.5

**Total Maximum Student Learning Hours**

52.5

**Minimum Units (CB07)**

1

**Maximum Units (CB06)**

1

**Prerequisites**

KIN R146A

**Entrance Skills****Entrance Skills**

Perform basic weight training exercises on machines and with free weights. Analyze exercise routines to ensure a balanced program through agonist/antagonist muscle movement.

**Prerequisite Course Objectives**

KIN R146A-Establish training goals based on individual needs such as: cardiovascular conditioning, power lifting, weight loss, and endurance building

KIN R146A-Analyze exercise routines to ensure a balanced program through agonist/antagonist muscle movements

KIN R146A-Analyze improved skills and techniques

KIN R146A-Perform basic weight training exercises on machines and with free weights

**Requisite Justification****Requisite Type**

Prerequisite

**Requisite**

KIN R146A

**Requisite Description**

Course in a sequence

**Level of Scrutiny/Justification**

Content review

**Student Learning Outcomes (CSLOs)**

**Upon satisfactory completion of the course, students will be able to:**

- |   |   |
|---|---|
| 1 | Correctly perform multi-joint conditioning exercises                                      |
| 2 | Apply metrics and performance data to design an exercise program that meets fitness goals |
| 3 | Adjust nutritional plan to enhance performance and improve exercise recovery              |
| 4 | Increase strength, flexibility, and cardiovascular ability by the end of the semester     |

**Course Objectives**

**Upon satisfactory completion of the course, students will be able to:**

- |   |   |
|---|---|
| 1 | Evaluate "max" testing results and compare previous results to deduce new workout weight for each individual exercise in program routine  |
| 2 | Build upon goals established in Weight Training/Conditioning I to progress performance in cardiovascular conditioning, power lifting, weight loss, and endurance building                   |
| 3 | Apply the principle of progressive overload to design and adapt a cardiovascular endurance training program   |
| 4 | Incorporate the use of bodyweight exercises, kettlebells, medicine balls, and resistance bands to plan and execute a cardio-strength training program                                       |
| 5 | Take periodic metrics to assess the success individual fitness  |
| 6 | Apply the concepts of nutrition to meal planning for pre-workout, post-workout, and performance enhancement   |
| 7 | Design a well-rounded muscular strength training program that includes horizontal push, horizontal pull, vertical push, vertical pull, rotational, knee dominant and hip dominant exercises |

**Course Content****Lecture/Course Content**

1. Review concepts introduced in Weight Training/Conditioning I
2. Develop fitness goals based on metrics and performance evaluation
3. Principles of Fitness
  - a. Principle of progressive overload
    - i. Frequency
    - ii. Intensity
    - iii. Time (duration)
    - iv. Type
  - b. Principle of specificity
  - c. Principle of rest and recuperation
  - d. Principle of reversibility
4. Level II multi-joint strength training exercises
  - a. Horizontal push
  - b. Horizontal pull
  - c. Vertical push
  - d. Vertical pull
  - e. Rotational
  - f. Knee dominant
  - g. Hip dominant exercises
5. Cardio Strength Exercises
  - a. Kettlebell
  - b. Medicine ball
  - c. Resistance bands
  - d. Free weights
6. Assess and interpret metrics
  - a. Assess metrics
    - i. Body fat
    - ii. Hip:Waist Ratio
    - iii. Weight
    - iv. Target Heart Rate
  - b. Use of performance assessments

- i. VO2Max
  - ii. 1 Repetition Max
  - iii. Squat analysis
  - iv. Flexibility
- 7. Nutritional concepts
  - a. Meal planning for weight-loss
  - b. Fueling for pre-workout
  - c. Post-workout refueling
- 8. Biomechanics of Physical Activity
  - a. Proper lifting mechanics
  - b. Force
    - i. Push-Pull
    - ii. Power
    - iii. Work
    - iv. Torque
  - c. Laws of Nature
    - i. Newton's First Law: Law of inertia
    - ii. Newton's Second Law: Law of Acceleration
    - iii. Newton's Third Law: Law of Action and Reaction
  - d. Assessment and Evaluation
    - i. Repetition Maximum
  - e. Anatomical Locations
    - i. Anterior
    - ii. Posterior
    - iii. Midline
    - iv. Medial
    - v. Lateral
    - vi. Superior
    - vii. Inferior
    - viii. Proximal
    - ix. Distal
    - x. Cephalad
    - xi. Caudal
    - xii. Superficial
    - xiii. Deep
    - xiv. Prone
    - xv. Supine
  - f. Planes of motion
    - i. Sagittal
    - ii. Frontal
    - iii. Horizontal (transverse)
  - g. Axis of rotation
    - i. Anterior-posterior (abduction/adduction)
    - ii. Medial-lateral (flexion/extension)
    - iii. Vertical (rotation)
    - iv. Circumduction
    - v. Protraction
    - vi. Retraction
  - h. Muscle
    - i. Isometric
    - ii. Concentric
    - iii. Eccentric
    - iv. Stretch –Shorten Cycle
    - v. Origin
    - vi. Insertion
  - i. Joint Movements

- i. Open Chain
- ii. Closed Chain

### Laboratory or Activity Content

1. Review concepts introduced in Weight Training/Conditioning I
2. Develop fitness goals based on metrics and performance evaluation
3. Principles of Fitness
  - a. Principle of progressive overload
    - i. Frequency
    - ii. Intensity
    - iii. Time (duration)
    - iv. Type
  - b. Principle of specificity
  - c. Principle of rest and recuperation
  - d. Principle of reversibility
4. Level II multi-joint strength training exercises
  - a. Horizontal push
  - b. Horizontal pull
  - c. Vertical push
  - d. Vertical pull
  - e. Rotational
  - f. Knee dominant
  - g. Hip dominant exercises
5. Cardio Strength Exercises
  - a. Kettlebell
  - b. Medicine ball
  - c. Resistance bands
  - d. Free weights
6. Assess and interpret metrics
  - a. Assess metrics
    - i. Body fat
    - ii. Hip:Waist Ratio
    - iii. Weight
    - iv. Target Heart Rate
  - b. Use of performance assessments
    - i. VO2Max
    - ii. 1 Repetition Max
    - iii. Squat analysis
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7. Nutritional concepts
  - a. Meal planning for weight-loss
  - b. Fueling for pre-workout
  - c. Post-workout refueling
8. Biomechanics of Physical Activity
  - a. Proper lifting mechanics
  - b. Force
    - i. Push-Pull
    - ii. Power
    - iii. Work
    - iv. Torque
  - c. Laws of Nature
    - i. Newton's First Law: Law of inertia
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    - iii. Newton's Third Law: Law of Action and Reaction
  - d. Assessment and Evaluation
    - i. Repetition Maximum
  - e. Anatomical Locations
    - i. Anterior
    - ii. Posterior

- iii. Midline
- iv. Medial
- v. Lateral
- vi. Superior
- vii. Inferior
- viii. Proximal
- ix. Distal
- x. Cephalad
- xi. Caudal
- xii. Superficial
- xiii. Deep
- xiv. Prone
- xv. Supine
- f. Planes of motion
  - i. Sagittal
  - ii. Frontal
  - iii. Horizontal (transverse)
- g. Axis of rotation
  - i. Anterior-posterior (abduction/adduction)
  - ii. Medial-lateral (flexion/extension)
  - iii. Vertical (rotation)
  - iv. Circumduction
  - v. Protraction
  - vi. Retraction
- h. Muscle
  - i. Isometric
  - ii. Concentric
  - iii. Eccentric
  - iv. Stretch –Shorten Cycle
  - v. Origin
  - vi. Insertion
- i. Joint Movements
  - i. Open Chain
  - ii. Closed Chain

## Methods of Evaluation

**Which of these methods will students use to demonstrate proficiency in the subject matter of this course? (Check all that apply):**

Skills demonstrations  
Written expression

**Methods of Evaluation may include, but are not limited to, the following typical classroom assessment techniques/required assignments (check as many as are deemed appropriate):**

Individual projects  
Journals  
Oral analysis/critiques  
Projects  
Quizzes  
Skills demonstrations  
Skill tests

## Instructional Methodology

**Specify the methods of instruction that may be employed in this course**

Audio-visual presentations  
Class activities  
Distance Education  
Demonstrations  
Instructor-guided interpretation and analysis  
Lecture

**Describe specific examples of the methods the instructor will use:**

1. Physical demonstration and explanation of how to use conditioning equipment by the instructor
2. Physical demonstration of how to perform conditioning exercises by the instructor
3. Instructor-led training and conditioning
4. Presentation of written articles by professionals in the field of conditioning
5. Media demonstrating biomechanics
6. Lecture on components of physical fitness and program design.

## **Representative Course Assignments**

### **Writing Assignments**

1. Exercise Program Design

### **Reading Assignments**

1. Research in muscular and cardiovascular training

## **Outside Assignments**

## **Articulation**

### **Comparable Courses within the VCCCD**

KIN M32 - Body Conditioning/Free Weights

KIN V26 - Weight Training and Conditioning: Free Weights

## **District General Education**

### **A. Natural Sciences**

### **B. Social and Behavioral Sciences**

### **C. Humanities**

### **D. Language and Rationality**

### **E. Health and Physical Education/Kinesiology**

#### **E2. Physical Education**

Approved

### **F. Ethnic Studies/Gender Studies**

## **CSU GE-Breadth**

### **Area A: English Language Communication and Critical Thinking**

### **Area B: Scientific Inquiry and Quantitative Reasoning**

### **Area C: Arts and Humanities**

### **Area D: Social Sciences**

### **Area E: Lifelong Learning and Self-Development**

#### **E Lifelong Learning and Self-Development**

Approved



**CSU Graduation Requirement in U.S. History, Constitution and American Ideals:****IGETC****Area 1: English Communication****Area 2A: Mathematical Concepts & Quantitative Reasoning****Area 3: Arts and Humanities****Area 4: Social and Behavioral Sciences****Area 5: Physical and Biological Sciences****Area 6: Languages Other than English (LOTE)****Textbooks and Lab Manuals****Resource Type**

Other Instructional Materials

**Description**

Free weights.

**Resource Type**

Other Instructional Materials

**Description**

Medicine balls.

**Resource Type**

Other Instructional Materials

**Description**

Kettle bells.

**Resource Type**

Other Instructional Materials

**Description**

Physio-balls.

**Resource Type**

Other Instructional Materials

**Description**

Resistance bands.

**Resource Type**

Textbook

**Classic Textbook**

No

**Description**Human Kinetics. (2021) *Science and Development of Muscle Hypertrophy Print CE Course-2nd Edition*. Human Kinetics. Champaign, IL.

## Distance Education Addendum

### Definitions

#### Distance Education Modalities

Hybrid (51%–99% online)

Hybrid (1%–50% online)

100% online

### Faculty Certifications

Faculty assigned to teach Hybrid or Fully Online sections of this course will receive training in how to satisfy the Federal and state regulations governing regular effective/substantive contact for distance education. The training will include common elements in the district-supported learning management system (LMS), online teaching methods, regular effective/substantive contact, and best practices.

Yes

Faculty assigned to teach Hybrid or Fully Online sections of this course will meet with the EAC Alternate Media Specialist to ensure that the course content meets the required Federal and state accessibility standards for access by students with disabilities. Common areas for discussion include accessibility of PDF files, images, captioning of videos, Power Point presentations, math and scientific notation, and ensuring the use of style mark-up in Word documents.

Yes

### Regular Effective/Substantive Contact

#### Hybrid (1%–50% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Discussions on videos Quizzes on readings Journal entries Peer reviews of assignments Self-paced workouts
E-mail	E-mail, class announcements and various learning management system tools such as "Message Students Who" and "Assignment Comments", will be used to regularly communicate with all students on matters such as clarification of class content, reminders of upcoming assignments and/or course responsibilities, to provide prompt feedback to students on coursework to facilitate student learning outcomes, or to increase the role of an individual educator in the academic lives of a student. Students will be given multiple ways to email instructor through both the learning management system inbox and district-provided email accounts.
Other DE (e.g., recorded lectures)	A variety of ADA compliant tools and media integrated within the learning management system to help students reach competency. Tools may include: recorded lectures, narrated slides, screencasts, online library resources, 3rd party (publisher-created) tools, websites and blogs, multimedia and streaming platforms like YouTube, Films on Demand, 3CMedia, Khan Academy, etc.

#### Hybrid (51%–99% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Discussions on videos Quizzes on readings Journal entries Regular use of asynchronous discussion boards will encourage various types of interaction and critical thinking skills among all course participants. Questions and topics posed will allow students to discuss, compare and contrast, identify, and analyze elements of the course content. Other discussion boards may be used for Q&A and general class discussion by students and instructor to facilitate student success and strengthen student learning outcomes.

E-mail	E-mail, class announcements and various learning management system tools such as “Message Students Who” and “Assignment Comments”, will be used to regularly communicate with all students on matters such as clarification of class content, reminders of upcoming assignments and/or course responsibilities, to provide prompt feedback to students on coursework to facilitate student learning outcomes, or to increase the role of an individual educator in the academic lives of a student. Students will be given multiple ways to email instructor through both the learning management system inbox and district-provided email accounts.
Other DE (e.g., recorded lectures)	Viewing skills and programs demonstrations Recorded lectures A variety of ADA compliant tools and media integrated within the learning management system to help students reach competency. Tools may include: recorded lectures, narrated slides, screencasts, online library resources, 3rd party (publisher-created) tools, websites and blogs, multimedia and streaming platforms like YouTube, Films on Demand, 3CMedia, Khan Academy, etc.
Synchronous Dialog (e.g., online chat)	Online chat Live sessions A set time each week may be provided when the instructor is available for synchronous chat to answer questions.
<b>100% online Modality:</b>	
<b>Method of Instruction</b>	<b>Document typical activities or assignments for each method of instruction</b>
Asynchronous Dialog (e.g., discussion board)	Regular use of asynchronous discussion boards will encourage various types of interaction and critical thinking skills among all course participants. Questions and topics posed will allow students to discuss, compare and contrast, identify, and analyze elements of the course content. Other discussion boards may be used for Q&A and general class discussion by students and instructor to facilitate student success and strengthen student learning outcomes.
E-mail	E-mail, class announcements and various learning management system tools such as “Message Students Who” and “Assignment Comments”, will be used to regularly communicate with all students on matters such as clarification of class content, reminders of upcoming assignments and/or course responsibilities, to provide prompt feedback to students on coursework to facilitate student learning outcomes, or to increase the role of an individual educator in the academic lives of a student. Students will be given multiple ways to email instructor through both the learning management system inbox and district-provided email accounts.
Other DE (e.g., recorded lectures)	A variety of ADA compliant tools and media integrated within the learning management system to help students reach competency. Tools may include: recorded lectures, narrated slides, screencasts, online library resources, 3rd party (publisher-created) tools, websites and blogs, multimedia and streaming platforms like YouTube, Films on Demand, 3CMedia, Khan Academy, etc.
Synchronous Dialog (e.g., online chat)	A set time each week may be provided when the instructor is available for synchronous chat to answer questions.
Video Conferencing	Video tools such as ConferZoom may be used to provide live synchronous or asynchronous sessions with students. ADA compliance will be upheld with Closed Captioning during the session or of the recorded session. Student-to-student group meetings will also be encouraged.
Face to Face (by student request; cannot be required)	The instructor may hold regularly scheduled office hours either in person or via-web conferencing, for students to be able to meet and discuss course materials or individual progress. Students can request additional in-person or web conferencing meetings with faculty member as needed. Faculty may encourage online students to form “study groups” in person or online.

## Examinations

### Hybrid (1%–50% online) Modality

Online

### Hybrid (51%–99% online) Modality

Online

## Primary Minimum Qualification

PHYSICAL EDUCATION

## Review and Approval Dates

### Department Chair

09/05/2020

### Dean

09/07/2020

### Technical Review

10/14/2020

### Curriculum Committee

10/14/2020

### Curriculum Committee

12/09/2020

### CCCCO

MM/DD/YYYY

### Control Number

CCC000579272

### DOE/accreditation approval date

MM/DD/YYYY