

# York University - School of Kinesiology and Health Science

2016 WINTER Course Outline Name:

Class:

## **Restorative Pilates: *Please Bring these Notes to Every Class ... Thank you!***

### **An Experiential Anatomy & Movement Education Course**

Course Director: Evelyn Charters

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On campus mailbox: Bethune College, Undergrad Office/Faculty mailroom

#### **HH/PKIN 0403 Restorative Pilates:**

(Section M) Tues & Thurs 12:30 - 1:20 pm Studio 4

(Section N) Tues & Thurs 1:30 - 2:20 pm Studio 4

#### **Course Description and Objectives:**

This course offers a practical experience of the Pilates Method created out of the work of Joseph Pilates, originally called "Contrology". Students will learn to experience Anatomy and Biomechanics in their own body, learning how...

- The Mind can be used to Control the Body.
- To integrate the Key Principles of Alignment, Breathing & Core Control.
- To find a Balance between Concentration & Relaxation; Stability & Mobility
- To Articulate the Spine segmentally to develop more Core Control.
- To intelligently and safely Progress or Modify Levels of Challenge or Difficulty.
- To apply the Restorative benefits of the Pilates Method to everyday activities as well as sports & recreation, healing and preventing injuries.

#### **Important Course Dates – WINTER 2016:**

- Start Date – Tuesday January 5th
- End Date – Thursday March 31st
- Reading Week > February 13th – 19th ... NO Classes
- Mid-term Practical – Thursday February 11th
- Final Practical Evaluation – Tuesday March 29th
- Written Theory Test – Thursday March 31st
- Self-Reflection Written Assignment due on Thursday March 31st

#### **Evaluation:**

Participation & Attendance: 40%

Written Test 20%

Mid-term Practical Evaluation 15%

Final Practical Evaluation 15%

Self-Evaluation Written Assignment 10%

#### **Description of Evaluation Categories:**

##### **a) Practical Evaluation: Mid-term – 15% and Final – 15%**

Evaluation of students' knowledge, ability and progress demonstrating and/or teaching Pilates mat exercises as practiced in class. Students will be evaluated by the instructor with participation from class peers.

##### **b) Theory: Written Test - 20%**

The Test will be written in class and will be based on reading handed-outs distributed during the term as well as material covered in class by the instructor. The format will include Multiple Choice, True or False, and Short Answer questions.

**Please Note: Make-up tests or other accommodations for missing the test will only be arranged with official documentation (e.g. doctor's note, accident report, funeral certificate, etc.) Please approach the instructor ASAP if you foresee that you may miss this test.**

**c) Self-Reflection Written Assignment - 10%**

Please use these course notes to record all the exercises we learn during this term. Prepare a brief written summary on your practical work this term – 2 pages double-spaced, 12 point font.

Note changes and progress in your Pilates mat work, areas you are still trying to improve and describe your *personal* experience. **Please hand in a hard copy paper submission.**

**d) Attendance/Quality of participation - 40%**

Missing more than 4 classes per term results in a Failing Mark. Each missed class lowers your attendance mark by 2 points. ***You may make up missed classes, please speak to your instructor!***

**Please Note:** Final marks will be converted to a letter grade (A, B, C, D or F).

**IMPORTANT COURSE INFORMATION FOR STUDENTS**

All students are expected to familiarize themselves with the following information, available on the Senate Committee on Curriculum & Academic Standards webpage (see Reports, Initiatives, Documents)

**[http://www.yorku.ca/secretariat/senate\\_cte\\_main\\_pages/ccas.htm](http://www.yorku.ca/secretariat/senate_cte_main_pages/ccas.htm)**

- York's Academic Honesty Policy and Procedures/Academic Integrity Website
- Ethics Review Process for research involving human participants
- Course requirement accommodation for students with disabilities, including physical, medical, systemic, learning and psychiatric disabilities
- Student Conduct Standards
- Religious Observance Accommodation

## **Pilates: A Movement Education**

### **MODULE 1: Introduction Joseph Pilates:**

#### **Founder of "Contrology" ... the Pilates Method of Exercise**



**Joseph Pilates** was born in Germany in 1883.

He developed his method over many years from his own personal experience as a child and adolescent. Suffering the effects of an unhealthy childhood, which included asthma, rickets and rheumatic fever, Joseph Pilates was determined to improve both physically and mentally. He was inspired by the ancient Greek ideal of 'Man' perfected in development of body, mind and spirit. He studied anatomy and developed himself as a body builder, a wrestler, gymnast, boxer, skier and diver.

Joseph Pilates was living and working in England when World War One broke out. As a German national, he was considered an enemy alien and placed into forced internment. While imprisoned in a camp, he began to develop exercises for his fellow prisoners that evolved into what we now know as the Pilates Mat Work.

Around 1925 Joseph Pilates emigrated to New York where he continued to train and further develop his work. He was a keen observer and believed that poor health was the product of poor posture and inefficient breathing. He called his work, "**Contrology**"... defining it as "the comprehensive integration of body, mind and spirit".

From 1925 until 1965, men and women, especially professional dancers in New York worked with Pilates to rehabilitate injuries and keep their bodies strong & flexible. Joe Pilates trained students who not only applied his work to their own lives, but became teachers of his Contrology method

themselves. Some of these teachers continued to teach the work exactly as Pilates taught it. This approach is called "classical style" Pilates. Other teachers continued to develop and refine his work with updated research in anatomy and exercise sciences. Joseph Pilates passed away in 1967. He had maintained a fit physique throughout his life and in remarkable physical condition well into his 80's.

## Posture Matters! ... Why?



**Non-verbal communication with others ...**  
and most important with yourself!

**Mental and Emotional Health...**  
are strongly linked to posture!

**Change the way you sit and stand and**  
**you will change how you feel!**



## **The Power Pose!**

Body language affects how others see us, but research is showing that it also changes how we see ourselves. Social psychologist **Amy Cuddy** shows how "power posing" -- standing in a posture of confidence, even when we don't feel confident -- can affect testosterone and cortisol levels in the brain, and might even have an impact on our chances for success. **Watch the video on Ted Talks:**  
<http://www.youtube.com/watch?v=Ks-Mh1QhMc&list=PL56CDAB06243C461A>

## What is Mindful Movement?

“Mindful Movement” describes movement that is sensed and shaped from within, rather than from an external source. Mindful movement education and therapy is the process of awakening **Kinesthetic Awareness** of the body during movement and in space. “Mindful Movement” involves an inner experience of the body, deepening the understanding of the motion. **“Feeling is Knowing”** ... mindful movement encourages students to develop their kinesthetic intelligence by experiencing a sense of deep awareness and fine-tuning communication between mind and body.

## **The ABC’s of Pilates ...**

**1. Alignment:** *The Rule of the Bones* > If the bones are in the correct position, the correct muscles will be working to support the bones. Muscles will be balanced, working more efficiently and effectively, with less strain or pain.

**2. Breathing:** “Above all ... Learn to Breathe correctly” Joseph Pilates quote. A variety of breathing techniques are available to facilitate and support different actions & movements.

**3. Core Control:** “It is the Mind itself that builds the Body” ... a favourite quote of Joe Pilates from the philosopher Schiller. Joseph Pilates called his work Contrology”. Today, we know his work as “Pilates” and it is often referred to as “Mindful Movement”.

**A. Correct ALIGNMENT of the 3 Body Weights:** individually and in relation to each other!  
> Head

> Ribcage

> Pelvis

Explore how correct alignment of the 3 Body Weights affects the position of the *entire Spine* in the following different **Exercise Positions (EP)** ...

1. Semi Supine aka The Relaxation Position
2. Supine
3. Sitting
4. Standing
5. Four Point Kneeling
6. Prone
7. Semi-Prone aka Side-Lying

**O = Objective:** Clarifying and understanding the purpose of any exercise is a crucial key in achieving the precise goal of the movement.

**WP = Watchpoints:** Working with awareness helps to fine-tune the alignment or movement which will ensure proper muscle recruitment.

**LM = Landmarks:** Finding & feeling the surface bony projections to help correct alignment

**EP = Exercise Position:** One of the previous 7 exercise positions

## **MODULE 2: Pelvic & Cranial Mobility & Neutral Alignment**

**PELVIS:** aka Pelvic Girdle

O = exploring the range of movement of the pelvis & lumbar spine

> release tension around the lumbar spine using the deep intrinsic spinal muscles

> finding the natural neutral position of the pelvis & lumbar spine

WP = moving in & out of neutral pelvis and lumbar spine

> avoid over-recruitment of the large extrinsic muscles eg. Gluteals & Quadriceps

> use a flowing breath to help the movement flow smoothly & easily

LM = ASIS aka Anterior Superior Iliac Spine

> Pubis aka pubic bone

> Navel aka belly button

> Ischial Tuberosities aka sitz bones

### 1. Pelvic & Lumbar Mobility Exercises

a) Compass: EP =

Image - rolling marble or small ball

> North-South:

O =

WP =

> East-West:

O =

WP =

b) Tail Swish: EP =

O =

WP =

c) Pelvic Clocks: EP =

Image: roulette wheel

O = combined flexion, extension & rotation

WP =

**Head** aka Skull/Cranium and Cervical Mobility and Correct Alignment:

O = exploring the range of movement of the Occiput with C-1 & C-2

> release tension around the Atlas (C-1) and the Axis (C-2) vertebrae using the small, deep sub-occipital muscles

> finding the natural neutral position of the skull & cervical spine

- WP = moving in & out of neutral head and cervical spine to mobilize and release tension  
 > avoid over-recruitment of the large extrinsic muscles eg. Upper Trapezius & Levator Scapula muscles  
 > use a flowing breath to help the movement flow smoothly & easily
- LM = Forehead in the same plane as the chin  
 > Keep back of neck long  
 > Image: Duct Tape from tip of chin to top of sternum

2. Head > Occipital/Cervical Joint Mobility & Release Exercises:

- a) Chin Nods/Tucks: EP = SA =  
 O =  
 WP =
- b) Head Rolls: EP = SA = combined rotation & lateral flexion  
 O =  
 WP =
- c) Loonie Nose Circles & Figure 8's: EP =  
 O =  
 WP =

**MODULE 3: Breathing, Concentration and Relaxation**

**“Breath as a Movement Tool”**

Explore the following breathing patterns:

1. Belly Breathing aka Diaphragmatic Breathing: EP =  
 O = Expand & release the abdominal muscles, promoting Relaxation  
 WP = Slower ... Deeper ... Quieter ... More Even
  2. Thoracic or Lateral Breathing: activates the intercostal muscles  
 O = Maintain connection of the abdominal muscles, supporting the core & spine  
 WP = Breath wide into the side & back of the ribcage, less expansion in the front
- a) Band or Scarf Breathing: EP =
- b) Partners: Child Pose > centre & side-bend

c) Ribcage Closure: SP =

O =

WP =

3. Plank position: which breathing pattern is most efficient ... belly or lateral?

4. Flowing Breath:

5. Percussive Breath:

#### **Module 4: The Spine**

The Spine is an information centre for Posture, Alignment and Range of Movement. It is the centre and midline of the body, responsible for the trunk's strength, support and mobility. Consider the natural curves of the Spine ... concave or convex?

**Lordosis:** lordotic curve >

example >

>

**Kyphosis:** kyphotic curve >

example >

>

**IMPORTANT NOTE: Always Create Length in the Spine** to avoid compression *everywhere* and to switch on "The Core" aka the Postural Muscles ... a key Pilates Principle!

1. Articulation of the Spine: segmental & controlled mobility of the vertebrae

O =

Hyper-mobility:

Hypo-mobility:

WP =

What are the different Movements of the Spine? In what directions can the spine move?

SA = Spinal Actions:

>

>

>

>

a) "Mountain & Valley" Variations: EP =

SA =

➤ Full movement

➤ Segmental movement

➤ “Ferris Wheel” O =  
SA = Combined Flexion & Extension

WP =

➤ “Hula Hoop” O =

SA = Combined Flexion, Extension & Lateral Flexion

WP =

b) Spine Curls: EP =  
WP =

SA = Segmental Lumbar Flexion

c) Roll Backs: EP =  
WP =

SA = Eccentric Flexion against Gravity

d) Cobra Prep: EP =  
WP =

SA = Segmental Thoracic Extension

e) Standing Roll Up & Down  
WP =

SA = Segmental Full Spine Flexion

f) Side Bends: EP =  
WP =

SA = Segmental Lateral Flexion

g) Bow & Arrow: EP =  
WP =

SA = Segmental Rotation

- 1.
- 2.
- 3.
- 4.



## **MODULE 5: Core Control for Stability**

Outer CORE = Abdominal Muscles **move** the Spine

a) Rectus Abdominus

SA=

b) Obliques > External and Internal > Spinal Actions

Lateral Flexion >

Rotation >

Forward Flexion >

Inner CORE = Deepest Abdominal Muscle **stabilize and support** the Spine

1. Transversus Abdominus (T.A.)

O =

SA=

WP =

a) Partners – isometric hand press: EP =

b) EP = 4 Point Kneeling aka Table Top

c) “Zipping & Hollowing”

EP = supine

d) Cylinder > Rib-Hip connection > Duct Tape image

2. Pelvic Floor Activation Exercises for Deeper Core Control:

O =

WP =

a) “Shutting off the Flow” EP =

b) “Elevator” > integrating pelvic floor activation with lower T.A. muscle fibres

EP =

3. Pelvic/Lumbar **Static Stability**: SA =  
 O = Finding and *maintaining* neutral pelvis and lumbar spine to challenge core control  
 WP =
- a) Leg Slides: EP =  
 O = prevent extension/flexion of the lumbar spine  
 WP =  
 > Single  
  
 > Single to Double  
  
 > Double to Supine
- b) Knee Openings: EP =  
 O = prevent rotation of the pelvis and lumbar spine  
 WP =  
 > Double  
  
 > Single
- c) Leg Folds: EP =  
 > adding levels of progression to increase core challenge & control  
 O = prevent flexion/extension of the lumbar spine  
 WP =  
  
 > Single  
  
 > Single to Double  
  
 > Double a.k.a. Chair Position
4. Pelvic/Lumbar **Dynamic Stability**:
- a) Roll Backs: EP = SA =  
 O =  
 WP =
- b) Side or Knee Rolls: EP = SA =  
 O = Rotate lower body & legs with control while stabilizing upper body  
 WP =

5. Static or Dynamic Stability?

a) Bridge Position with Single Leg Folds: EP = SA =  
O =  
WP =

b) Curl Ups supporting head: EP = SA =  
O =  
WP =

6. Exercise Progressions:

➤ Explore Lever Lengths & Limb Levels to add Core Challenge

Which is more challenging ...

a) Short or Long Lever?

b) High or Low Lever?

c) "Starfish" Arms and Rib Cage Closure with Leg Slides into Supine:

EP =

>

>

>

>

d) Dead Bug Series: Combining Arms & Legs to challenge Core Control

EP =

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>

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**MODULE 6: The Hip Joint**

1. Hip Joint mobility exercises:

O = release & mobilize ball & socket joint to help maintain Pelvic Stability

WP =

***Differentiation/Disassociation means:***

***List 4 Benefits of Synovial Fluid:***

>

>

>

>

a) Hip Joint Ball & Socket mobility series: EP =  
O = increase flow of synovial fluid and ROM of internal/external hip rotation  
WP =  
>  
>  
>

b) Hip Release combo – combine knee openings & leg slides: EP =  
O = to increase flow of movement & co-ordination  
WP =  
>  
>  
>  
>

## 2. Hip Joint Stabilizing & Strengthening:

a) Oyster series: EP =  
O = isotonic, open chain engaging gluteus medius  
WP =  
> single  
  
> double

b) Balance: EP =  
O = isometric, closed chain strengthens hip & knee stabilizers  
> gluteus medius  
> vastus medialis  
WP =

## 3. Hip Joint: Balancing Stability with Mobility

a) Leg Slides: EP = 4 Point Kneeling  
O = maintain pelvic stability while extending & flexing hip & knee joint  
WP =

4. Hip Joint Lengthener/Opener Stretch/ Psoas release: EP =  
> foam roller, cushion, towel or mat under pelvis  
>  
>  
>

## MODULE 7: The Shoulder Girdle

### 1. Mobility of the Shoulder blades - protraction & retraction

➤ Scapular Slide & Glide:

O =

WP =

a) EP = Relaxation Position/semi-supine

b) EP = side-lying

### 2. Static Stability of the Shoulder Girdle: EP =

O = increasing ROM of shoulder joint with progressions

WP = "imprint" scapulae to facilitate Disassociation/Differentiation of Ball in the Socket

a) Elbow circles > *"juicy joints" with short levers*

b) Arm Scissors > *long levers with palms turned in to encourage activation of serratus anterior*

c) Arm Circles > *from small ROM to larger*

### 3. Dynamic Stability of the Shoulder Girdle: Proper alignment of the shoulder girdle and arms together with correct movement sequence is **crucial to prevent injury.**

**"Hitch Hiker"** EP =

O =

WP = Long arms at side of torso, laterally rotate from the shoulder joint, pointing thumbs outward

> open & widen collar bone (clavicle)

> correct placement of scapula on ribcage

> lift top of sternum while softening and lowering tip of sternum > "duct tape" to pubic bone

> helium balloon to lift, lengthen & correct head & neck alignment

### Scapulohumeral Rhythm:

O = to correct alignment and sequence of movement while abducting arm overhead to prevent injury in the shoulder joint.

WP > Arm laterally rotates, slightly in front of the shoulder, as it abducts to the side, palm facing forward

> Scapula upwardly rotates just before it reaches shoulder height, allowing the arm to continue abducting overhead

> Arm continues to rotate so that the palm is facing in towards mid-line once overhead

> Clavicle slightly elevates at the distal end

a) "Floating Arms" – single > double: EP =

> Image: "wings" coming from back ... visualize the wind lifting the arms from underneath to activate support from the serratus anterior, lower trapezius and latissimus dorsi instead of over-recruiting upper trapezius & levator scapula

b) "Windmill Arms": EP = semi-supine or standing

> challenge alignment, coordination & core control

> combine arm scissors with arm circles for co-ordination

Notes:

## **Restorative Pilates Mat Class Exercise List:**

Evelyn Charters [chartersevelyn@gmail.com](mailto:chartersevelyn@gmail.com)

### **1. Spinal Warm Up:**

a) Mountain & Valley

b) Ferris Wheel

c) Hula Hoop

### **2. Pelvic & Lumbar Mobility & Release:**

a) Compass > North-South > East-West

b) Tail Swish

c) Pelvic Clocks

### **3. Head/Neck Mobility & Release Exercises:**

a) Chin Nods/Tucks

b) Head Rolls

c) Loonie Nose Circles & Figure 8's

### **4. Relaxation Position > Alignment & Breathing:**

a) Scapula Slides > semi supine & side-lying

b) Arm circles ROM > short & long levers

c) Arm Scissors > Ribcage Closure

d) Restorative Belly Breathing > Thoracic Breathing

e) Ribcage Closure > Lateral Breathing in semi-supine > supine for more challenge

f) Spine Curl to Bridge > Lumbar release

g) Hip opener with single Knee Pull

h) Double Knee Pull with Curl Up

### **6. Spine Series:**

a) Rolling like a Ball

b) Roll Backs > repeat

c) Cobra Prep

- d) Child Pose
- e) Roll Up to Standing
- f) Side Bends
- g) Roll Downs
- h) Walk out to Plank > Stretch out in Child Pose
- i) Thoracic Breathing in Side Bending Child Pose
- j) Bow & Arrow

**7. CORE Control > Static & Dynamic Stability:**

- a) Leg Slides > Single > Single to Double > Double
- b) Hip Joint Ball & Socket > Knee Openings > Windshield Wipers
- c) Hip Release combo
- d) Leg Folds > Single > Single to Double > Double/Chair Position
- e) Side or Knee Rolls
- f) Oyster > single > double
- g) Curl Ups supporting head
- h) Single Leg Stretch
- i) Hundreds
- j) "Starfish" Arms and Legs
- k) Rib Cage Closure with Leg Slides into Supine
- l) Dead Bug Series > Arms & Legs

**8. Standing Series:**

- a) Balance > Alignment & Stability of Foot, Ankle, Knee & Hip
- b) "HitchHiker" > Alignment of Shoulder Girdle
- c) Scapulohumeral Rhythm > Floating Arms> Wings
- d) Arm Scissors > Circles > Windmill Arms

**9. 4 Point Kneeling Stability Series:**

- a) Roll Down into 4 Point Position
- b) Leg slides > Leg Lifts
- c) Bird Dog
- d) Knee Lift (short lever) > Plank (long lever)

**10. Rest & Restore**

- a) Child Pose > Breathing
- b) Hip Opener > Psoas Release
- c) Corpse Pose > check alignment of 3 Body Weights

**Stay Balanced ... Long & Strong ... Move with Effortless Ease ...**



**Visit our FaceBook page: Body Control Pilates Canada**

**PKIN Restorative Pilates 0403 Section: Term:**

Please Print CLEARLY!

Class Day & Time:

Student Last Name:

First Name:

York Email:

Non-York Email:

**MY STORY TODAY:**

**Physical, Mental & Emotional ... My Body & Mind!**

Activities:

Injuries Past or Present:

Pain, Strain or Areas of Concern:

Stress Factors:

My BLISS ... what gives me JOY: