



NIPISSING UNIVERSITY PHYSICAL EDUCATION - GYMNASTICS PRACTICAL ACTIVITY

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COURSE CONTENT OVERVIEW

BLOCK 1 – 2024

PHED-2213-FA011

Tuesday, September 3 – Thursday, September 26, 2024

9:00 a.m. – 10:50 a.m.

CALCULATION OF MARKS / SCHEDULE

CLASS AT GYMTRIX FACILITY – 7 Ferris Drive - Thursday, September 12, 2024 (Class 4)

Transportation will be provided by Nipissing University. Students will be picked up at **8:50 a.m.** at RSAC

CLASS PARTICIPATION <i>- 3 possible marks per class X 8 classes</i>	Practical	24%	.5 - on time .5 – assist with setup .5 - proper attire .5 - engaged in the class, listening .5 – physically participate in all activities .5 – assist with equipment take-down at end of class
MANDATORY SKILLS TEST	Practical	36%	Thursday, September 19 (Class 6)
OPTIONAL SKILLS TEST			Tuesday, September 24 (Class 7)
ROUTINE PERFORMANCES	Practical	20%	Thursday, September 26 (Class 8 – final class)
FINAL EXAM	Written	20%	Thursday, September 26 (Class 8 – final class)
		100%	



LEARNING OUTCOMES

1. To participate in the activity of gymnastics through skill progression
2. To learn the fundamental movement patterns (FMP's) and corresponding Biomechanical principles that make up all gymnastics skills
3. To learn, work with and understand the gymnastics philosophy of **Fun, Fitness & Fundamentals**
4. To participate with peers and develop a group routine/sequence
5. To enjoy gymnastics as a safe, fun activity that anyone can participate in

STUDENT EXPECTATIONS

Safety

- **Students may not attempt any skill or activity unless directed by instructor**

Proper attire

- Close fitting (non loose) athletic wear
- Bare feet or socks
- All hair that could obstruct vision must be tied

What not to wear

- Street clothes (denim, skirts Etc.)
- Hats
- Clothing with strings, hoods or belts
- Jewelry

Attendance

- Be on time
- Help with equipment (before and after)
- Be engaged in activity
- Be willing to 'try'

It cannot be stressed enough, that 100% attendance in this course is essential for success.

For students who must miss a scheduled class for extenuating medical or varsity reasons, a make-up opportunity may be available. For a makeup opportunity to be considered, a formal request **via email must be sent to gymtrix@bellnet.ca prior** to the class to be missed. Makeup opportunities (if available) may include (but are not limited to) an assignment, attendance at a similar class at Nipissing, or practical participation at Gymtrix. Marks for makeup classes may be full or partial. This will be at the discretion of the instructor.



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STUDY NOTES

- Please note that this is an 'overview' only. Content covered in class may, or may not be included in this handout
- It is important that you participate in classes and keep any notes that you feel will assist you in obtaining the knowledge required to complete this course.

SAFETY

DUTY OF CARE

1. Are the activities **suitable** to the age and condition of the students?
2. Have the students been **progressively developed**?
3. Was there **adequate supervision** for the level and age of the students?
4. Proper Attire

FACILITY

5. Is the **facility and equipment adequate, safe** and suitably arranged?

TERMINOLOGY

CENTRE OF MASS

- Balance point of body at any given point
- point about which a body rotates
- intersection of all axis when rotating

Note: position of C of M can change based on distribution of body mass when body positions change

BASE OF SUPPORT

Part(s) of the body that is/are bearing all of the weight of the person

BASIC GYMNASTICS STATIONARY POSITIONS

Tuck	Stride	Hands/Knees (Doggie)	Front Support	Bridge
Pike	Straddle	Table	Side Support	Curved in
Straight	Wolf	Bear	Rear Support	Curved out

PRIMARY INTERNAL AXES OF ROTATION

- | | |
|-----------------------------|--|
| 1) Transverse | Rolls, Somersaults, Walkovers, Handsprings |
| 2) Longitudinal | Turns, Twists, |
| 3) Anterior/Posterior (A/P) | Sideways Cartwheel, Sideways somersaults |

PREVAILING BODY MOVEMENTS/ACTIONS

Neck Flexion/Extension	Ankle Dorsi/Plantar Flexion	Shoulder Flexion/Extension
Trunk Flexion/Extension	Wrist Flexion/Extension	Shoulder Elevation/Depression
Hip Flexion/Extension	Elbow Flexion/Extension	
Knee Flexion/Extension		

FUNDAMENTAL MOVEMENT PATTERNS / BIOMECHANICS

All physical movements fall into one or more of the following FMPs:

1. LANDINGS Absorb Force	2. STATIONARYS Stability
For maximum Safety and/or Control, Absorb/dissipate force over maximum: a) BODY SURFACE and/or b) TIME (slow as possible)	a) OVER - Centre of Mass must remain over the Base of Support b) DISTANCE of CENTRE OF MASS TO THE BASE OF SUPPORT -shortest distance = most stable c) SIZE OF BASE OF SUPPORT -largest Base of Support = most stable d) ALLIGNED BODY SEGMENTS -most aligned body segments = most stable -straight is more stable than disjointed line or arch
3. LOCOMOTIONS Linear/horizontal movement	4. ROTATIONS Angular movement about an Internal Axis
a) MOVE the C of M outside the Base of Support creating instability b) REGAIN stability c) REPEAT	a) CREATE ROTATION with an <i>off centre force</i> (a force that does not pass through the Centre of Mass) b) MANIPULATE SPEED OF ROTATION - body mass moves closer or further away from the axis in use during rotation
5. SWINGS Angular movement about an External Axis	6. SPRINGS Create Force
Mechanics Move C of M closer and further from bar (axis) a) LENGTHEN down swing b) SHORTEN up swing	Mechanics a) LARGE FORCE, TIGHT BODY b) ACTION/REACTION

EXAMPLES/TYPES OF FUNDAMENTAL MOVEMENT PATTERNS

1. LANDINGS	2. STATIONARYS
a) On the feet F/S/B b) On the hands F/S/B c) Shoulder/Doggie Roll d) Back Shoulder Roll e) Flat on the back (breakfall)	a) Supports b) Hangs & inverted hangs c) Balances
3. LOCOMOTIONS	4. ROTATIONS
a) On the feet b) On the hands c) Feet and hands	a) Rolls/Somersaults b) Turns c) Twists d) Circling e) Cartwheels
5. SWINGS	6. SPRINGS
a) Long swing (single bar) b) Cross support swing c) Front support swing d) Other	a) From the feet/legs b) From the hands/arms

PHYSICAL ATTRIBUTES (ESPF)

	STRENGTH	ENDURANCE	POWER	FLEXIBILITY
Definition	The amount of force that a muscle can generate when it contracts	The ability to resist fatigue	Combination of speed with strength	The range of possible motion around a joint or series of joints
Types	Absolute Relative	Muscular, Cardiovascular		Active range - the range of movement achieved with no external force assisting (use of muscular effort) Passive Range - the range of movement achieved using an external force (no muscular effort)
How to train	Maximum Resistance 1-10 Repetitions or holds	Muscular – High Reps/Low Resistance	Medium Resistance With Speed	-holding end of stretch -PNF

MUSCLE CONTRACTION - Types

- 1) Isometric - no change in muscle length (ie hold)
- 2) Concentric - muscle shortens (ie Lift)
- 3) Eccentric - muscle lengthens (ie Lower)

MOTOR ATTRIBUTES

- 1) Agility
- 2) Balance
- 3) Co-ordination
- 4) Spatial Awareness/Kinesthetic

GYMNASTICS DISCIPLINES

	ARTISTIC	TRAMPOLINE	TUMBLING	RHYTHMIC	ACROBATIC	SPORT AEROBIC
Events	Womens Apparatus 1) Vault 2) Uneven Bars 3) Balance Beam 4) Floor Exercise Mens Apparatus 1) Vault 2) Parallel Bars 3) Still Rings 4) Pommel Horse 5) Floor Exercise 6) Horizontal (High) Bar	1) Individual 2) Synchro	Mens Womens	1) Balls 2) Hoops 3) Ribbons 4) Clubs	Group	
Olympics?	Yes	Yes	No	Yes	No	No