Therapeutic Exercise

Class

PTHA 2509

Concepts, principles, and application of techniques related to therapeutic exercise and functional training. Fortyeight lecture hours and ninety-six lab hours per semester.

Course Learning Objectives

Describe the principles of therapeutic exercise, formulate a rationale for the implementation of therapeutic exercise; demonstrate techniques of therapeutic exercise and functional training; execute patient education; and demonstrate communication skills.

Understand the characteristics of therapeutic exercise. (F1, F11, C5, C7)

1.1 Define therapeutic exercise.

1.2 Define and differentiate selected types of exercise, including passive, active, and active-assisted range of motion, stretching, strengthening, coordination, endurance (aerobic, conditioning, reconditioning), and relaxation exercise, posture awareness training and proprioceptive neuromuscular facilitation.

1.3 Define and differentiate selected types of strengthening exercise, including isometric, isotonic, isokinetic, concentric, and eccentric exercise.

2. Understand the role of the physical therapist assistant in the provision of therapeutic exercise. (F1, F3, F8, F9, F11, C5, C6)

2.1 Describe the process of treatment planning to achieve short and long term goals established by the supervising physical therapist.

2.2 Identify and explain specific patient responses and conditions which require the physical therapist assistant to contact the supervising physical therapist for additional guidance before proceeding with therapeutic exercise.

2.3 Describe requirements for effective documentation of therapeutic exercise.

2.4. Analyze patient scenarios to determine patient readiness for treatment, ongoing appropriateness of therapeutic exercise and potential need for adjustments within the plan of care.

3. Understand the response of various body systems to exercise. (F1, F3, F11, C5, C7)

3.1 Describe changes in heart rate and blood pressure which normally occur during exercise.

3.2 Demonstrate skill in measuring heart rate and blood pressure during and after aerobic exercise and compare the changes which are observed to the expected normal response.

3.3 Describe changes in muscle, bone, and other connective tissue which normally occur during exercise.

3.4 Describe changes in selected body systems and structures which normally occur as a result of exercise.

4. Understand effective use of various types of exercise equipment. (F1, F8, F9, F11, C5, C7, C18, C19, C20)

4.1 Describe types of exercises which can be performed using selected pieces of exercise equipment.

4.2 Determine the most effective piece or type of exercise equipment to use to accomplish selected treatment goals.

4.3 Demonstrate skill in incorporating appropriate exercise equipment into class presentations of treatment programs.

5. Understand various manual therapeutic exercise techniques. (F1, F8, F9, F11, C5, C7)

5.1 Demonstrate performance of selected manual stretching, manual strengthening, inhibition, and facilitation techniques.

5.2 Describe manual exercise techniques to accomplish treatment goals identified in the plan of care.

5.3 Describe the physical therapist assistant's role in use of joint mobilization. (F1, F2, F5, F7)

5.4 Identify indication, contraindications, and precautions for performing peripheral joint mobilization. (F7, F8, C5, C6, C7)

5.5 Describe the basic grades utilized in extremity joint mobilization techniques and identify a purpose of each. (F1, F2, F5)

5.6 Identify the capsular patterns and resting positions for each of the major extremity joints of the body. (F1, F2, F5, F7)

5.7 Given a patient scenario and use of convex/concave rule, select the most appropriate type of extremity joint mobilization technique. (F5, F7)

6. Understand specific parameters of selected types of exercise which are required to produce desired outcomes. (F1, F8, F9, F11, C5, C7)

6.1 Describe specific characteristics of exercise (frequency, intensity, duration, movement quality, etc.) necessary to effect desired changes when using selected exercises.

6.2 Demonstrate skill in the application of exercise parameters in the provision of therapeutic exercise programs.

7. Understand specific characteristics of selected orthopedic conditions. (F1, F3, F8, F9, F11, C5, C7)

7.1 Describe the structure which is affected and the characteristics of selected orthopedic injuries.

7.2 Describe general treatment guidelines for selected orthopedic conditions.

7.3 Describe specific precautions during the treatment of selected orthopedic conditions.

8. Demonstrate and provide instruction in appropriate exercise techniques for various diagnoses and understand guidelines for progression of exercises based on patient responses. (F1, F3, F8, F9, F11, C5, C7, C18, C19, C20)

8.1 Describe exercises which are typically used for the treatment of selected diagnoses.

8.2 Demonstrate skill in the application of strengthening, endurance (aerobic, conditioning, reconditioning) and relaxation exercises.

8.3 Demonstrate and provide instruction to other students in the performance of postural awareness, coordination, and extremity mobilization exercises.

8.4 Describe specific criteria for progression of exercises within the plan of care as patient conditions change.

- 9. Understand principles and application of basic exercise techniques commonly encountered in an acute care setting within the plan of care established by the physical therapist (F1, F5, F6, F8, F9,
 - 1. Describe and differentiate types of exercises.
 - 2. Describe the rationale for selection of exercise techniques.

- 9.4 Demonstrate skill in the performance of selected exercise techniques utilizing effective communication skills.
 - 1. Identify and explain patient responses that necessitate immediate action or adjustments within the plan of care and communication with the supervising physical therapist.
 - 2. Explain the role of exercises in achieving short and long term goals within the plan of care

Required Textbooks

Textbooks: Fundamentals of Orthopedic Management for the Physical Therapist Assistant; 4th Edition; Shankman & Manske; Mosby, 2016

Manual Moblization of the Joints Joint Examination and Basic Treatment The Extremities; 8th Edition; Kaltenborn, Freddy; Norli, 2014

Course Packet: PTHA 2509 Course Packet (available in Canvas classroom)

Evaluation Standards

In order to receive credit for this course, all students must:

- 1. Complete all unit exams.
- 2. Complete all laboratory sessions and worksheets.
- 3. Complete all assigned homework, projects and class presentations.
- 4. Complete the final exam.

Grade Compilation

Unit Exams 50%

Quizzes 10%

Lab/Projects/Assignments 20%

Final Exam 20%

Grading Scale

- A 90-100%
- B 80-89%
- C 75-79%
- F <75%

Failed Lab Practical and Skills Check offs

Lab practical examinations and/or skills check-offs will be given to assess the student's proficiency in laboratory skills taught. **ALL** lab skill check-off assessments and Lab Practical examinations must be successfully completed and passed. When lab skill check-offs are assigned prior to a lab practical examination, failure to complete **ANY** of the laboratory skills check offs will result in the inability to sit for the lab practical, resulting in a grade of zero. **Students are required to pass all lab practical examinations and skills check offs with a minimum of 75% in order to pass the class. The student will be given 3 opportunities to correct a failed lab practical exam (LPE) and/or check-offs with grade deductions for each attempt.** In the event that the student does not pass a LPE or a check off, the student will fail the lab portion of the class, and fail the course and will not be allowed to continue in the PTA program. Both the lab and lecture portions of each class must be passed with a 75% for the student to receive a passing grade in the class. The grade deductions are noted in the course syllabus and on the LPE and check-off forms.

FAILURE OF AN EXAM

If a student makes below a passing grade on an exam (makes a grade below 75%) they are required to seek counseling and remediation from the instructor for the course. It is the students' responsibility to seek out the instructor promptly for this counseling and remediation during the instructors posted office hours by appointment. If the student fails to contact the instructor within an appropriate time to get remediation prior to the next examination, they are outside the department policy and are subject to disciplinary action. The instructor and student will develop a plan for the student to show competency in knowledge of the material.

If the student fails to show competency in the subject matter, or fails to maintain an overall average above 75% on major exams, the student will not be allowed to pass the class, continue onto other coursework, or continue to clinical rotations. Major exams are defined as the all unit exams and include the final exam. They do not include quizzes, assignments, or daily coursework. All lab Practical exams and check offs must be successfully passed with a 75 or above in order to continue with the program. See the failed lab practical policy above.

For the student who scores below a 75% on a major exam, remediation and reassessment of knowledge must be done. The instructor may employ various methods to determine and reassess the competency and may require a student to retest. However, a student who makes below a **65%** on a major exam, **must** re-test for competency. The student can bring their exam score up to a maximum of a 75% one time only, on the first failed test making a grade below a 65%. If the grade on the re-test is lower than the first attempt, the lower grade will be used in recording and calculation the exam and overall course average. Additional counseling and remediation will be necessary to ensure competency in that material. Students must make a minimum overall score of 75% and a minimum average of 75% on major exams to pass all PTHA classes and continue in the program. If a student academically fails out of the program they have a right to appeal by following the Health Science Technology Appeals procedure located in the PTA Program Student handbook. The student has the opportunity to re-apply to the program. See the Readmission policy for more information.

ACADEMIC DISMISSAL

Students in the PTA Program must successfully complete all general education courses with at least a "C" to continue in the PTA program. If a student makes below a 75% in any PTHA course, they will not be allowed to continue in the program and will be academically dismissed. Additionally, you must maintain a passing average of 75% of major exams, and pass all check offs and lab practical exams in each course to be able to show competency and continue in the program. Major exams are defined as unit tests and includes the final exam. Bonus points or extra credit points will only be awarded after competency is met. If a student does not meet the competency guidelines bonus points will not be applied. See the Bonus Point/Extra Credit Policy in the PTA Program Handbook.

Students must also complete each clinical course with at least a "C" or 75% grade (see Clinical Failure policy). If these standards are not met, dismissal from the program will occur.

If the student fails a class, the student's progression in the program will be halted. The student is then subject to the same readmission criteria as students who withdraw from the program.

Professional Behavior

Professional behavior is absolutely essential both while the individual is a student in this program as well as after graduation. The Professional Behaviors Assessment form provides a standard for behavior and a mechanism for self-assessment by the student as well as assessment by faculty during the academic component of the program. If a faculty member observes consistent failure to demonstrate acceptable professional behavior by a student, the faculty member will utilize the assessment form as a tool for counseling the student. Failure to respond appropriately to counseling regarding professional behaviors will result in dismissal from the program.

Quizzes

Quizzes are given covering material in the reading assignments to encourage students to read the textbook in preparation for the lectures. Therefore, quizzes covering a particular topic are given prior to the lecture covering the same topic. Once the lecture has started, the corresponding quiz cannot be made up if it has been missed. A grade of zero will be recorded for quizzes missed for any reason.

Course Progression

INTRODUCTION

- I. Definitions
- II. Goals of Therapeutic Exercise
- III. Objectives of Therapeutic Exercise
- IV. Characteristics of Therapeutic Exercise
- V. Characteristics of Effective Patient Supervision
- VI. Patient Status Assessment
- VII. Treatment planning
- VIII. Introduction to joint mobility

EXERCISE EQUIPMENT

- I. General Guidelines
- II. ROM and Stretching Equipment
- III. Strengthening Equipment
- IV. Endurance Equipment

V. Coordination / Balance Equipment

BASIC EXERCISE TECHNIQUES

- 1. Introduction
- 2. Principles and Rationale
- 3. Types
- 4. Red Flags

STRENGTHENING EXERCISE

- I. Definitions
- II. Benefits of Strengthening Exercises
- III. Goals of Strengthening Exercise
- IV. Indications for Strengthening Exercise
- V. Precautions
- VI. Contraindications for Strengthening Exercises
- VII. Types of Muscle Contractions
- VIII. General Guidelines for Strengthening Exercises
- IX. Isotonic Exercise
- X. Progressive Resistance Exercises (PRE's)

- XI. Practical Application of PRE
- XII. Isometric Exercise
- XIII. Isokinetic Exercise
- XIV. Plyometric Exercises (stretch-shortening drills)
- XV. Closed Kinetic Chain Exercises
- XVI. Progression (beginning with weakness or injury)
- XVII. Circuit Training
- XVIII. Special Populations
- XIX. Reversibility or "Detraining"
- XX. Strengthening lab

STRETCHING EXERCISES

- I. Definitions
- II. Contractile Tissue (Muscle)
- III. Causes of Flexibility Loss
- IV. Multi-joint Flexibility
- V. General Guidelines for Stretching Exercises
- VI. Stretching lab including proper stretching techniques

RELAXATION EXERCISES

- I. Definitions
- II. Review of Autonomic Nervous System
- III. Goals of relaxation exercises
- IV. Relaxation Principles
- V. General Guidelines
- VI. Interventions to Enhance the Effectiveness of Relaxation Exercises
- VII. Relaxation lab techniques for general relaxation

ENDURANCE (AEROBIC) EXERCISES

- I. Definitions
- II. Cardiovascular System Response to Endurance Exercise
- III. Respiration Response to Endurance Exercise
- IV. Muscle Response to Endurance Exercises

- V. Abnormal Responses to Aerobic Exercise
- VI. Health Benefits from Endurance Exercise
- VII. Guidelines for Cardiopulmonary Endurance Exercises
- VIII. Guidelines for Muscular Endurance Exercises
- IX. Precautions
- X. Endurance lab including blood pressure/heart rate monitoring pre/post exercise

ORTHOPEDIC INJURIES

- I. Definitions
- II. Ligament Injury (Sprains)
- III. Treatment of Ligament Injuries
- IV. Bone Injury Fracture
- V. Treatment of Fractures
- VI. Cartilage Injury and Treatment
- VII. Muscle Injury and Treatment
- VIII. Tendon Injury and Treatment

THE ELBOW AND FOREARM

- I. Elbow / Forearm Exercises
- II. Nerve Injuries Around the Elbow Joint
- III. Lateral Epicondylitis (Tennis Elbow)
- IV. Medial Epicondylitis (Golfers Elbow)
- V. Medial Valgus Stress Overload
- VI. Fractures / Dislocations
- VII. Total Elbow Arthroplasty
- VIII. Elbow/forearm exercise lab including implementing HEP/manual therapy techniques

THE WRIST AND HAND

- I. Wrist / Hand Exercises
- II. Rheumatoid Arthritis
- III. Carpal Tunnel Syndrome
- IV. de Quervain's Disease (de ker vanz)
- V. Sprains

VI. Fractures

- VII. Dupuytren's Disease (de pwe trahn)
- VIII. Tendon Injuries and Repairs
- IX. Complex Regional Pain Syndrome (CRPS)
- X. Wrist/Hand lab including implementing HEP/manual therapy techniques

THE SHOULDER

- I. Shoulder Exercises
- II. Impingement Syndrome
- III. Rotator Cuff Tears
- IV. Anterior Shoulder Dislocation
- V. Posterior Shoulder Dislocation
- VI. Adhesive Capsulitis
- VII. Acromioclavicular Joint Sprain
- VIII. Fractures
- IX. Shoulder Arthroplasty
- X. Shoulder Arthrodesis
- XI. Shoulder lab including implementing HEP/manual therapy techniques

THE HIP

- I. Definitions
- II. Hip Exercises
- III. Hip Fractures
- IV. Pelvic fractures
- V. Osteoarthritis (DJD)
- VI. Total Hip Replacement (arthroplasty)
- VII. Hemiarthroplasty of Hip
- VIII. Legg-Calvé-Perthes Disease (leg-cal-VAY-PER-teez)
- IX. Trochanteric Bursitis
- X. Ischial Bursitis (ischiogluteal bursitis, Tailor's or Weaver's bottom)
- XI. Iliopectineal bursitis (Psoas bursitis)
- XII. Soft Tissue Injuries

XIII. Hip lab including implementing HEP/manual therapy techniques

THE KNEE

- I. Knee Exercises
- II. Anterior Cruciate Ligament Sprain
- III. Posterior Cruciate Ligament Sprain
- IV. Medial Collateral Ligament Sprain
- V. Meniscus Injuries
- VI. Articular Cartilage Injuries
- VII. Patellofemoral Pain Syndromes
- VIII. Fractures
- IX. Total Knee Replacement (arthroplasty)
- X. Knee lab including implementing HEP/manual therapy techniques

THE ANKLE AND FOOT

- I. Functional Relationships of the Ankle and Foot
- II. Ankle / Foot Exercises
- III. Ankle Sprains
- IV. Achilles Tendinopathy
- V. Achilles Tendon Rupture
- VI. Overuse Syndromes
- VII. Fractures of the Ankle and Foot
- VIII. Foot Deformities
- IX. Total Ankle Replacement
- X. Arthrodesis (fusion)
- XI. Athletic Taping
- XII. Ankle lab including implementing HEP/manual therapy techniques

TMJ AND FACIAL MUSCLES

- I. TMJ Dysfunction
- II. Bell's Palsy
- III. CVA with facial droop and poor oral control
- IV. TMJ lab including implementing HEP/manual therapy techniques

THE SPINE

I. The Lumbar Spine
II. Lumbar Strains and Sprains
III. Lumbar Disc Injury
IV. Other Lumbar Spine Pathologies
V. The Thoracic Spine
VI. The Cervical Spine
VII. Cervical Strains and Sprains
VIII. Cervical Disc Injury
IX. Other Cervical Spine Pathologies
X. Mechanical Traction for Disc Injuries
XI. Review of Inclinometry
XII. Spine lab including implementing HEP/manual therapy techniques

COORDINATION EXERCISES

- I. Definitions
- II. Development of Coordination
- III. Coordination Assessment
- IV. General Guidelines for Coordination Exercises
- V. Frenkel's Exercises

PROPRIOCEPTIVE NEUROMUSCULAR FACILITATION (PNF)

- I. Introduction
- II. Patterns of The Head, Neck and Trunk
- III. Extremity Patterns
- IV. Specific Techniques
- V. Application of PNF Techniques within the Developmental Sequence
- VI. PNF lab

Absences

Regular attendance in lecture and lab is critical and has a direct effect on the final grade that a student earns in class. *Non-attendance on the part of a student may result in grade penalty or may* lead to dismissal from the program.

A student should attend all lecture and laboratory sessions. Good "working" habits would mean arriving 10 - 15 minutes ahead of the scheduled start time of the class, staying for the complete session and returning from breaks promptly. Habitual or patterned absenteeism in lecture or lab will not be tolerated. Absences in laboratory sessions

are particularly problematic because of the lost opportunity to practice skills for them self, and for their lab partner; therefore, students are responsible for arranging to acquire any skills missed during a laboratory absence. Note, not all lab experiences can be made up.

All absences must be reported to the appropriate faculty member prior to the start of class. Try to reach the faculty member by phone at their office phone number. If the faculty member cannot be reached directly, a voice mail message may be left the day of the absence. Email notification is not acceptable and should only be used if phone systems are not available. Contacting a classmate to have him/her notify the faculty member is not acceptable. Failure to notify the faculty prior to class for any absence will result in anautomatic deduction of 2 points from the student's final grade for each episode.

The student may be allowed to miss 2 class/lab days without it adversely affecting their grade (exception: exam days, lab practical or check off days) if proper notification has been made. Every absence over the allotted 2 days will result in the student's final course grade being reduced by 2 points each absence. If the student misses more than 30 minutes of class due to being tardy or leaving early, it will constitute an absence. Three tardies, regardless of how late the student is, count as 1 day absence.

If it is necessary for a student to miss an exam, the instructor must be notified prior to the scheduled exam time and arrangements must be made for make-up. It is the instructor's option to give the same exam as the one missed or a different exam over the same content. It is the students' responsibility to make arrangements to make up the exam. A 5% penalty will be assessed for taking an exam out of the scheduled time. An additional 5% penalty will be assessed for each day the exam has not been made up. See missing an Exam/Test/Quiz in the PTA Program Handbook for more information.

Acceptance of Late Assignments

Projects or outside assignments are due at the beginning of class on the assigned due date. Late papers will receive a 5% per day grade penalty. This penalty will continue to be assessed each day the assignment is not turned in.

Missing an Exam

Exams are defined as formally scheduled examinations covering a major portion of the course content and cumulatively comprising a relatively large percentage of the overall grade for a course. Every effort should be made by the student to be present for all exams. If it is necessary for a student to miss an exam, the instructor must be notified prior to the scheduled exam time and arrangements must be made for make-up. It is the instructor's option to give the same exam as the one missed or a different exam over the same content. If arrangements to make up the exam are not made within one class day, a 5% per day penalty will be assessed each day the exam is not taken.

Instructional Methods

Lectures, laboratory activities, reading assignments, individual and/or group projects and assignments. Some components of this course will be computer based. Student access to a computer/printer will be required for completing assignments. Computers are available to students in the Academic Support Center in the Mineral Wells Education Center.

Disabilities

ADA Statement:

Any student with a documented disability (e.g. learning, psychiatric, vision, hearing, etc.) may contact the Office on the Weatherford College Weatherford Campus to request reasonable accommodations. *Phone*: 817-598-6350 *Office Location:* Office Number 118 in the Student Services Building, upper floor. *Physical Address:* Weatherford College 225 College Park Drive Weatherford, TX.

Academic Integrity

Academic Integrity is fundamental to the educational mission of Weatherford College, and the College expects its students to maintain high standards of personal and scholarly conduct. Academic dishonesty of any kind will not be tolerated. Academic dishonesty includes, but is not limited to, cheating on an examination or other academic work, plagiarism, collusion, and the abuse of resource materials including unauthorized use of Generative AI. Departments

may adopt discipline specific guidelines on Generative AI usage approved by the instructional dean. Any student who is demonstrated to have engaged in any of these activities will be subject to immediate disciplinary action in accordance with institutional procedures.

Program Learning Outcomes

SCANS

The Secretary's Commission on Achieving Necessary Skills (SCANS) identified Competencies in the area of Resources, Interpersonal, information, Systems, and Technology; and foundation skills in the areas of Basic Skills, Thinking Skills, and Personal Qualities. This course is part of a program in which each of these Competencies and skills are integrated. The specific SCANS Competencies that are recognized throughout this course are noted at the end of the appropriate competencies or task listed. (See reference chart at end of syllabus.)

SCANS COMPETENCIES

Foundation Skills	Workplace Competencies		
Basic Skills: Reads, writes, performs arithmetic & mathematical operations, listens, and speaks	Resources: Identifies, organizes, plans & allocates resources		
F1	Reading: Locates, understand, & interprets written information in prose & in documents such as manuals, graphs, & schedules	C1	Time & Selects goal-relevant activities, ranks them, allocates time, & prepares & follows schedules
F2	Writing: Communicates thoughts, ideas, information, & messages in writing; & creates documents such as letters, directions, manuals, reports, graphs, & flow charts	C2	Money & Uses or prepares budgets, makes forecasts, keeps records, & makes adjustments to meet objectives
F3	Arithmetic: Performs basic computations ; uses basic numerical concepts such as whole numbers, etc.	C3	Material & Facilities & Acquires, stores, allocates, & uses materials or space efficiently
F4	Mathematics: Approaches practical problems by choosing appropriately from a variety of mathematical techniques	C4	Human Resources & Assesses skills & distributes work accordingly, evaluates performance & provides feedback
F5	Listening: Receives, attends to, interprets, & responds to verbal messages & other cues	Information: Acquires & uses information	
F6	Speaking: Organizes ideas & communicates orally	C5	Acquires & evaluates information
Thinking Skills: Thinks creatively, makes decisions, solves problems, visualizes, knows how to learn, & reasons	C6	Organizes & maintains information	
F7	Creative Thinking: Generates new ideas	C7	Interprets & communicates information
F8	Decision Making: Specifies goals & constraints, generates alternatives, considers risks, & evaluates & chooses best alternative	C8	Uses computers to process information
F9	Problem Solving: Recognizes problems & devises & implements plan of action	Interpersonal: Works with others	
F10	Seeing Things in the Mind's Eye: Organizes, & processes symbols, pictures, graphs, objects & other information	С9	Participates as a Member of a Team: Contributes to group effort

F11	Knowing How to Learn: Uses efficient learning techniques to acquire & apply new knowledge & skills	C10	Teaches others new skills
F12	Reasoning: Discovers a rule or principle underlying the relationship between two or more objects & applies it when solving a problem	C11	Serves Clients/Customers: Works to satisfy customers' expectations
Personal Qualities: Displays responsibility, self-esteem, sociability, self-management, integrity, & honesty	C12	Exercises Leadership: Communicates ideas to justify position, persuades & convinces others, responsibly challenges existing procedures & policies	
F13	Responsibility: Exerts a high level of effort & perseveres towards goal attainment	C13	Negotiates: Works toward agreements involving exchange of resources, resolves divergent interests
F14	Self-Esteem: Believes in own self-worth & maintains a positive view of self	C14	Works with Diversity: Works well with men & women from diverse backgrounds
F15	Sociability: Demonstrates understanding, friendliness, adaptability, empathy, & politeness in group settings	Systems: Understand complex interrelationships	
F16	Self-Management: Assesses self accurately, sets personal goals, monitors progress, & exhibits self-control	C15	Understands Systems: Knows how social, organizational, & technological systems work & operates effectively with them
F17	Integrity/Honesty: Chooses ethical courses of action	C16	Monitors & Corrects Performance: Distinguishes trends, predicts impacts on system operations, diagnoses systems' performance & corrects malfunctions
		C17	Improves or Designs Systems: Suggests modifications to existing systems & develops new or alternative systems to improve performance
		Technology: Works with a variety of technologies	
		C18	Selects Technology: Chooses procedures, tools or equipment including computers & related technologies
	Updated: Spring 2021	C19	Applies Technology to Task: Understands overall intent & proper procedures for setup & operation of equipment
		C20	Maintains & Troubleshoots Equipment: Prevents, identifies, or solves problems with equipment, including computers & other technologies.