Semester Long Project

**Instructors:** Assignments are presented for each chapter, building a portfolio for a semester-long project. Chapters and assignments can be distributed weekly or presented as a full list for students to work on at their own pace throughout the semester. Some elements of the portfolio will involve building a major project of their own choosing, but others are designed to develop specific skills. These are related to some degree to a cumulative project focusing on the key elements of each chapter as the project builds throughout the semester.

**Purpose:** To help students develop the knowledge and practical skills they need to be effective and knowledgeable regarding the field of athletic training. You will be asked to develop various aspects of athletic training knowledge. You will be able to apply the topics that are presented in each chapter.

# 1 Athletic Training as a Profession

Please select a setting around which you will build your project. Next name your clinic, pro team, school, university, military, industrial, or occupational setting. Finally, determine the size of the program based on the number and types of athletic programs and the type of athlete you are serving (youth, teens, college, active adults, professional athletes, military, or occupational athletes [e.g., firefighters, policemen]).

# 2 Administration and Professional Development

Using the PREMIER model, build a staff policy around each of the areas. This is your chance to be creative.

P – What is the professional image you would like your staff to portray?

R – What are your goals and objectives for your career in AT?

E – How will you educate yourself to be the best AT?

M – Define your strengths. How can you maximize your strengths to make you the best AT?

I – What ideas do you have that will improve athletic training for the betterment of your athletes?

E – Who will you enlist to create the best athletic training program?

R – Reflection helps a person reframe a day’s activities. What activities will you take part in to allow you to reflect and center your thinking?

# 3 Design and Development of the Athletic Training Facility

For the setting you chose in chapter 1, integrate the information below to design an athletic training facility:

1. High school with 250 athletes
2. Junior college with 350 athletes
3. Division II university with 500 athletes
4. AT rehabilitation clinic treating 150 patients per day

Determine the amount of square footage you will need in order to have the optimal space for your design; then create a graphic layout of your facility. Be sure to include the appropriate areas or regions and include specific equipment and safety features (such as lighting and electrical spaces). Be creative and design an ideal space for your patients and/or athletes based on the information presented in this chapter. Use design tools online for easy design templates. Present this design in your portfolio or to your peers.

# 4 Documentation and Record Keeping

For this element, you will shift your focus from your chosen setting to situate yourself as a newly hired high school athletic trainer. As the athletic trainer, you are responsible for creating a record-keeping system for a new athletic training program. It is the first time this high school has ever had an athletic trainer, and there are no records at all other than preparticipation clearance records for each athlete. Create a record-keeping plan that includes the name, purpose, and storage plan for each record. Provide samples of each record in a portfolio. Create five specific policies to protect the confidentiality of the athlete. Finally, create a flow chart to reflect the flow of records for each athlete who uses your facility.

# 5 Fiscal Management

Go back to your facility design project for the chapter 3 assignment to purchase equipment for a new facility. See below for the budget you will need to use for this plan:

1. High school with 250 athletes Budget for $25,000/year
2. Junior college with 350 athletes Budget for $60,000/year
3. Division II university with 500 athletes Budget for $75,000/year
4. AT rehabilitation clinic treating 150 patients per day Budget for $100,000/year

You will design a budget for the initial start-up for the facility. You will not need to account for the building itself, salaries, or structures such as lighting or flooring, but all furniture and equipment will be part of the budget. Put together a requisition (using the template from the PO in the unit) for spending the lump-sum amount provided.

# 6 The Preparticipation Physical Exam

In this part of your project, you will need to set up stations for the preparticipation physical examination. Using the facilities at your own educational institution, determine which facilities will be used. Create a drawing within the facilities indicating each station.

Some important points in this part of the assignment:

1. There must be 12 stations.
2. Each station must allow for privacy.
3. Males and females must be separated when being examined.
4. Make sure there is unimpeded flow through each station.
5. Determine who will monitor each station and provide service.

# 7 Introduction to Anatomy

Athletic trainers will use anatomical terms in their daily lives as they communicate with physicians and others. Being able to identify a motion and use the proper term is essential. Videotape another student performing at least five physical movements such as bending the knees, throwing a ball, lifting a barbell, or any other motion. Using the anatomical terms in this chapter, describe the following for each motion:

1. Description of the activity Ex. Bending the knee

2. Anatomical location and plane of movement Ex. Knee; sagittal plane

3. Type of joint moving Ex. Synovial joint

4. Movement Ex. Flexion of the knee

5. Prime mover location and antagonist location Ex. Prime-anterior; antagonist-posterior

# 8 Basics of Tissue Injuries

Write instructions for a patient who is wearing a plaster cast on his arm for at least six weeks. How does the patient take care of the cast so it does not deteriorate over six weeks’ time. The patient will need to know how to shower, what to do if there is an itch under the cast, what to do if the cast becomes loose as the swelling reduces, and what to do if his hand swells.

Write instructions for a patient who has eight stitches on her thigh. How will she keep these clean while still playing softball for the next week, and what should she do to prevent infection?

# 9 Head Injuries

In this part of your semester-long project, you need to evaluate the team members who have reported to you with the following problems. You have five athletes with previous concussions with some complications:

* 1. an athlete with migraines that had one previous concussion within the last year;
  2. an athlete with a second impact syndrome that is yet to be resolved;
  3. an athlete who at the time of concussion was unconscious for five minutes, but it is now resolved;
  4. an athlete who has trouble concentrating after a concussion, which occurred within the last month; and
  5. an athlete who is younger and smaller than everyone else on the team, who has good speed.

Your list of preventative considerations should include: equipment, position played, a change of sports, limits on playing time, and quitting the sport entirely.

# 10 Facial Injuries

You are an athletic trainer and are responsible for making sure that each athlete on your team has his mouth guard, contact lenses, glasses, sunglasses, goggles, and eye protection. As part of the semester long project, you will determine the following:

1. What type of an inventory system will you set up for each of these items to ensure the athletes have their face protection needs met?
2. How will you go about checking to ensure the items are in good working order?
3. What is the process you will use when an item needs repair or replacement?
4. To ensure that an athlete does not lose playing time during a game, how will you be able to replace the item as quickly as possible?
5. The AT needs an emergency kit for dental and eye injuries. What will your kits contain?

# 11 Throat and Thorax Injuries

In each chapter there has been an algorithm that allows you to follow along when injury occurs. Using the information within this chapter, build an algorithm that can guide the athletic trainer through the evaluation process of an acute chest injury.

# 12 Abdominal Injuries

What are the likely abdominal injuries that athletes in your selected sport are likely to incur? Why are athletes more likely to receive these types of abdominal injuries in your sport than in other sports? Please give a list of references to substantiate your conclusions. Your research must come from medical research.

# 13 Spinal Injuries

Utilizing the sport you have selected for your semester-long project, determine what types of activity are most likely to cause back pain in your athletes. With each activity, write at least one suggestion about how to prevent that injury. Consider equipment, exercise, rules changes, etc.

# 14 Shoulder Injuries

Using the algorithm in this chapter, create one for bone injuries described in this chapter.

# 15 Elbow Injuries

Build a chart with the types of mechanisms of injury that occur in the elbow. Once you have the chart, add to it the potential injuries that can result. Finally, list the most distinguishing sign or symptom that is associated with each injury listed in this chapter.

# 16 Wrist and Hand Injuries

In this part of the project, create a chart that indicates all ranges-of-motion that the wrist, fingers, and thumb are able to do. Interview three people and have them demonstrate the range-of-motion at each joint. Write down your observations of each person and compare and contrast their ranges-of-motion. What do you suspect causes the differences in the individual ranges?

# 17 Hip, Pelvis, and Thigh Injuries

In this chapter you learned about injuries and conditions that occur in the lower extremity. Some athletes are more prone to injuries in this area. Considering the sport team selected for the semester-long project, what are the injuries or conditions that are likely to occur? Give reasons to support your conclusions.

# 18 Knee Injuries

Knee injuries are quite common in athletic training and sports medicine. Part of the role of the sports medicine team is to prevent injuries. Create a policy that would be implemented to prevent knee injuries for a selected team or athlete (if in a clinic setting) based upon your original setting choice in chapter 1. Describe why you designed the program as you did and how you will enforce the policy.

# 19 Foot, Ankle, and Lower-Leg Injuries

In terms of the team selected for your semester-long project and the equipment available to prevent injuries in general, list the equipment available in your sport to prevent each injury addressed in this chapter. Are there any injuries that cannot be prevented with current equipment? What equipment would you invent to protect your athletes from a particular injury?

# 20 Patient Assessment and Treatment Methods

Throughout this text book you have been given a number of acronyms. Build a chart that lists all the acronyms in the first 20 chapters, defines them, and explains how each is used in athletic training.

# 21 Reconditioning Programs

Develop a therapeutic exercise program for a knee sprain using the information found in chapters 20 and 21. The exercise program you build must include phases of

1. mobility,

2. flexibility,

3. proprioception,

4. muscular strength,

5. muscular endurance,

6. muscular power,

7. cardiorespiratory endurance, and

8. sport-specific function.

When building the sport-specific function, do so based on the types of movements the sport you have chosen incorporates.

# 22 Psychosocial Aspects of Athletic Training

Investigate your current school’s support for athletes who may have mental health issues. Make a list of additional resources you believe may be helpful for your athletes. Think about some alternative mental health practices as well as some that are simple and cost nothing. Now generate a poster that lists these resources so that it can be mounted in a locker room or the training room.

# 23 Planning for Emergencies

Design a crisis plan for the facility in which your project sport takes place. Your plan must include the following:

1. The name of facility, the address, and nearest cross streets
2. Crucial phone numbers
3. Names or roles of those involved in each part of the plan and what each will do
4. A list of equipment needed in your facility
5. Form of communication to be used between those involved
6. Transportation necessary to move the athlete off the field
7. Person chosen to document actions during the emergency
8. Directions to the closest hospital

You must practice the crisis plan, pinpoint failures, and improve upon it prior to submission.

# 24 Primary and Secondary Procedures

In this part of the semester-long project, evaluate the playing facility and determine where the triage site should be set up. Second, create a plan that will identify all injured persons and when they will be evacuated. Determine which hospital is a level 1 trauma hospital that will receive the most significantly injured. Determine if you have access to a medical helicopter and where it would land on your field. Be able to provide GPS coordinates for the medical helicopter.

# 25 Environmental Situations and Injuries

Build a chart that monitors the before-and-after weight for each individual on your project team. Where will the chart be posted? Determine the weighing area and the person who will monitor the before-and-after weight; this place must be private. What types of containers will you use to ensure the athlete is properly hydrated before and after practices?

# 26 Stabilization and Transportation of Injured Athletes

An AT needs to have equipment ready for every emergency situation. Find the following pieces of equipment in the training room and at the site of your project’s team or clinic location. Why would some facilities have more equipment than others?

* Stretcher
* Scoop stretcher
* Golf cart
* Backboard
* Straps for the backboard or short board
* Board splints
* Vacuum splints
* Slings
* Short board
* Face mask removal tool
* Scoop stretcher
* Crutches
* Knee immobilizer
* Stiff cervical collar
* Towels

# 27 Protective Taping and Wrapping

Athletic trainers perform a variety of taping and wrapping task in their daily practice. For this project, you will record on a matrix each of the taping and wrapping skills you see demonstrated for an entire week in your clinical rotation. After calculating the number of times each taping is done, write a brief report (1 page) that includes the type of taping or wrapping used and the purpose of the taping or wrapping procedure. Focus on the top two most commonly performed procedures in your report. Find objective information (perhaps injury statistics or type of sports at your school) that would explain why one would be done more than the others.

In a previous chapter you were asked to determine the types of injuries that were most common within the sport you selected for your semester-long project. Given the information you determined about your sport injuries and given the number of athletes on your team, the number of days of practice, and whether everyone receives preventative taping, build a formula to determine the amount of tape, size of tape, types of tape and elastic bandages, and the size of elastic bandages you will need for your in-season sport. You must be able to justify your formula.

# 28 Protective Equipment Used in Athletics

Protective equipment must be cleaned and maintained on a regular basis. Speak with the coaches or equipment managers for at least two different sports that have equipment in addition to uniforms and shoes. Ask them to show you the guidelines and procedures for cleaning and maintaining the equipment. Interview them to determine the frequency of the cleaning and the person responsible for ensuring and recording that it is complete. Compare these practices to recommendations found on the Internet.

Every team requires protective equipment or bracing in some form. First determine the list of equipment and typical braces used in your semester project’s sport program. Investigate how to properly care for equipment and braces used by your team. Next create a checklist for your athletes to ensure the equipment or braces being used are checked before each use. Include how the athlete should properly inspect the equipment and what to do if it does not pass inspection.

# 29 Basic Diagnostic Imaging and Testing

As a health care provider, it is important that you understand the resources you have available to you in your immediate geographic region as well as the surrounding areas. Because some medical conditions require specialized testing with expensive equipment (as mentioned in the chapter), not every facility has all equipment. For this project, you will determine at least ONE facility in your area that has the capabilities to perform the tests highlighted in this chapter. Using the sample chart below, find the facilities and list their locations and phone numbers. This will provide a reference for you and your patients of facilities that offer these tests.

**Sample Chart**

|  |  |  |  |
| --- | --- | --- | --- |
| **Diagnostic Test** | **Within 10 Miles** | **Within 20 Miles** | **Within 30 Miles** |
| X-ray |  |  |  |
| Bone scan |  |  |  |
| DEXA |  |  |  |
| CT scan |  |  |  |
| MRI |  |  |  |
| PET scan |  |  |  |
| Ultrasound |  |  |  |
| Blood work - general |  |  |  |
| Drug testing |  |  |  |

# 30 Conditions and Illnesses

You will have athletes with high blood pressure, diabetes, epilepsy, and asthma, so for this part of your semester-long project, you will design a plan to keep a record of which athletes have which conditions. Make a chart of treatment interventions that will be needed for each of these athletes. This needs to include whether the athlete has medications or requires special assistance administering medications and identification of the proper equipment for diagnosis of each type of condition.

# 31 Communicable Diseases

Preventing the spread of communicable diseases is important. Speak with the school administrators or nurse, as well as the athletic trainer at your school, and get a copy of immunization and communicable disease policies and procedures. Evaluate the policies and procedures and create an information handout for one of the communicable diseases listed in the chapter to serve as an educational resource for the student body and athletes. Have these available on a bulletin board or as handouts in your athletic training facility.

# 32 Common Drugs Used in Athletics

Get a copy of your school’s policy for distribution of medication. Determine where medications can safely be kept in the athletic training room as well as when the team travels to an away game. Write a training program that instructs coaches about the distribution of medication.

# 33 Nutrition and Weight Control

Your project team will probably eat out if it travels to away games. Collect one caloric menu from a fast food restaurant and determine the best foods for a pregame meal based on the following athletes: a low carbohydrate diet, a vegetarian diet, and a gluten-free diet. Explain why the items selected meet the criteria for each of these dietary plans.

# 34 Athletes With Disabilities

In chapter 3 you created a blueprint of the ideal athletic training facility for the group of athletes you intend to serve. How will your blueprint change if you have a blind athlete, a wheelchair-bound athlete, an athlete using a walker, and one who is a double amputee A9? How will you ensure safe movement for each of these athletes within the space? Please provide a new blueprint indicating the changes, ensuring you have at least considered the minimal acceptable standard for accommodating their unique needs.