



BTEC Level 3 National Extended Certificate in Sport

Induction Pack



PEARSON

In this induction pack you will find the following:

- **Introduction to the course** (what is it all about?).
- **Assessment** (how you will be assessed in each unit).
- **Unit Summary** (what each is about and the assessment objectives for each unit).
- **Expectations** (what we expect from you whilst completing this course).
- **Useful Resources** (where you can access additional support and information).
- **Unit Break Down** (each unit broken down to give you more information).
- **Research Activities** (tasks that you will be completing during the first two weeks of the course and over the summer).
- **Blank Skeleton** (for one of your research tasks)
- **Example Assessment Material** (for the units that will be externally assessed)

Introduction to the course

Welcome to your Pearson BTEC Level 3 National Extended Certificate in Sport. This booklet is designed to introduce you to the course, to inform you of what you will be covering over the entirety of the course, how you will be assessed and to give you tasks to complete during the first two weeks of the course and over the summer.

You will be covering a broad basis of study including anatomy and physiology, fitness training and programming, professional development in the sports sector and application of fitness testing. This qualification is designed to support progression to higher education when taken as part of a programme of study that includes other appropriate BTEC Nationals or A Levels. It is equivalent in size to one A-Level and will be delivered over 360 Guided Learning Hours (GLH), you will however be expected to complete tasks, such as research in your own time in order to be successful on the course.

Please use this induction pack to help you understand the course, the assessment methods and to refer to when you need further information about the course you will be starting.

If you have any questions you must always ask your teachers.

Assessments

You will be assessed externally (by the exam board) and internally (by your teachers) during the duration of the course.

Pearson BTEC Level 3 National Extended Certificate in Sport				
Unit number	Unit title	GLH	Type	How assessed
	Mandatory units – learners complete and achieve all units			
1	Anatomy and Physiology	120	Mandatory	External
2	Fitness Training and Programming for Health, Sport and Well-being	120	Mandatory Synoptic	External
3	Professional Development in the Sports Industry	60	Mandatory	Internal
	Optional units – learners complete 1 unit			
4	Sports Leadership	60	Optional	Internal
5	Application of Fitness Testing	60	Optional	Internal
6	Sports Psychology	60	Optional	Internal
7	Practical Sports Performance	60	Optional	Internal

We must cover the following units (mandatory)

- Unit 1 – Anatomy and Physiology
- Unit 2 – Fitness Training and Programming for Health, Sport and Well-being
- Unit 3 – Professional Development in the Sports Industry

We will also be covering the following unit in order to cover the correct amount of GLH and to link in with the previous units delivered:

- Unit 7 – Practical sports performance

The programme for delivery will be determined by the exam board and when assessments are available, therefore meeting deadlines is vital for success on the course. You will be given details of dates, deadlines and examinations early in September.

Externally Assessed Units

Unit	Type
Unit 1: Anatomy and Physiology	• Written examination set and marked by Pearson. • 1.5 hours. • 90 marks.
Unit 2: Fitness Training and Programming for Health, Sport and Wellbeing	• A task set and marked by Pearson and completed under supervised conditions. • In Part A, learners will be provided with a case study two weeks before a supervised assessment period in order to carry out research. • In Part B, the supervised assessment period is two hours over a period of two days timetabled by Pearson. • Written submission. • 60 marks.

*Unit 1 is out of 80 marks.

Unit Summary

Unit 1 - Will be assessed with a written exam, when the exam is taken will depend on the delivery plan which will be decided early in September.

Unit 2 - Will be assessed through a set assignment by the exam board and will be externally assessed. Again the assignment will be set at a time appropriate to delivery and will be decided in early September.

Unit 3 – Will be internally assessed and subject to exam board sampling of your teachers grading.

Unit 6 – Will be internally assessed and subject to exam board sampling of your teachers grading.

Expectations

In order to be successful on the course you will need to:

- Develop the ability to work independently,
- Research actively and methodically,
- Give presentations and be active group members,
- Be organised and meet all deadlines set,
- Revise thoroughly before all practise and real exams,
- Complete all work to the highest standard you are capable of,
- Keep your notes up to date and in order,
- Catch up on any work that you may miss due to absence,
- Attend any additional sessions that are put on for you,
- Always ask when you are unsure of something in lessons,
- Read through your unit outlines and apply the information when completing tasks,
- Complete all induction work,
- Be highly motivated to achieve on the course,
- Attend all lessons, on time and with the right attitude.

Useful Resources - Recommendations

Web Sites

American College of Sports Medicine	www.acsm.org
BrianMac	www.brianmac.co.uk
British Association of Sport and Exercise Sciences	www.bases.org.uk
Coachwise	www.1st4sport.com

Human Kinetics www.humankinetics.com

Peak Performance www.pponline.co.uk

Sports Coach www.brianmac.co.uk

Sports Coach UK www.sportscoachuk.org

Sport Science www.sportsci.org

Top End Sports www.topendsports.com

Journals

American College of Sport Medicine's Health and Fitness Journal

British Journal of Sports Medicine

Exercise and Sport Sciences Reviews

International Journal of Sports Science and Coaching

Medicine and Science in Sports and Exercise

Research Quarterly for Exercise and Sport

Text Books

Howley E T and Franks B D – *Health Fitness Instructor's Handbook* (Human Kinetics Europe, 2003)
ISBN 9780736042109

Palastanga N – *Anatomy and Human Movement: Structure and Function*
(Butterworth-Heinemann, 2006) ISBN 9780750688147

Sharkey B J and Gaskill S E – *Fitness and Health* (Human Kinetics, 2006) ISBN 9780736056144

Tortora G J and Derrickson B H – *Principles of Anatomy and Physiology, 12th edition*
(John Wiley & Sons, 2008) ISBN 9780470233474

Adams G M – *Exercise Physiology Laboratory Manual: Health and Human Performance*
(McGraw Hill Higher Education, 2001) ISBN 9780072489125

American College of Sports Medicine – *ACSM's Health-Related Physical Fitness Assessment Manual* (Lippincott Williams & Wilkins, 2007) ISBN 9780781775496

Coulson M – *The Fitness Instructor's Handbook: A Complete Guide to Health and Fitness – Fitness Professionals* (A&C Black, 2007) ISBN 9780713682250

Hazeldine R – *Fitness for Sport* (The Crowood Press, 2000) ISBN 9781861263360

Heyward V H – *Advanced Fitness Assessment and Exercise Prescription* (Human Kinetics, 2006) ISBN 9780736057325

Howley E T and Franks B D – *Health Fitness Instructor's Handbook* (Human Kinetics Europe, 2003) ISBN 9780736042109

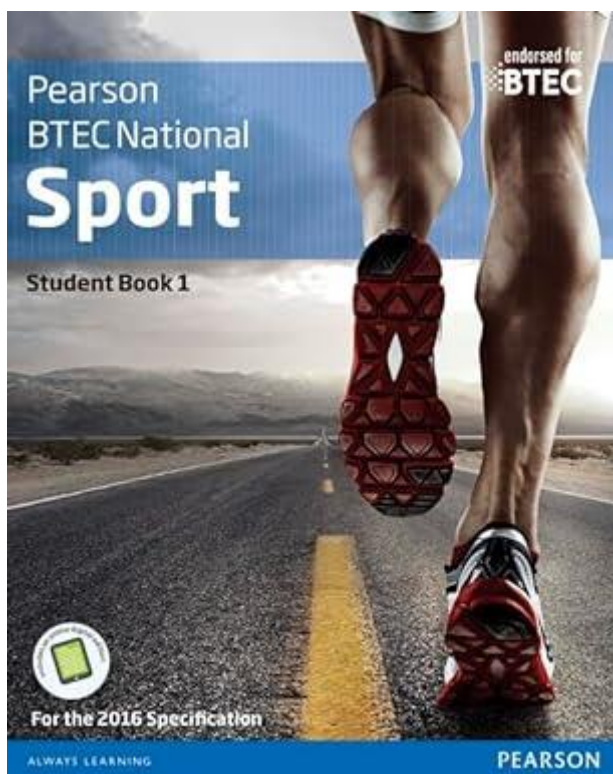
National Coaching Foundation – *Physiology and Performance – NCF Coaching Handbook No. 3* (Coachwise Ltd, 1987) ISBN 9780947850241

Powers S K and Howley E T – *Exercise Physiology: Theory and Application to Fitness and Performance* (McGraw Hill Higher Education, 2006) ISBN 9780071107266

Sharkey B J and Gaskill S E – *Fitness and Health* (Human Kinetics, 2006) ISBN 9780736056144

Watson A W S – *Physical Fitness and Athletic Performance: A Guide for Students, Athletes and Coaches* (Longman, 1996) ISBN 9780582091108

Wilmore J and Costill D – *Physiology of Sport and Exercise* (Human Kinetics, 2008) ISBN 9780736055833



Unit Breakdown

Unit 1 – Anatomy and Physiology

Unit Summary

You will explore how the skeletal, muscular, cardiovascular and respiratory systems function and the fundamentals of the energy systems.

Unit Introduction

Having an understanding of body systems is imperative in the sports industry so that professionals can help support people who are taking part in sport and exercise. The human body is made up of many different systems that interrelate to allow us to take part in a huge variety of sport and exercise activities. For example, an athlete can go from rest to sprinting in a matter of seconds, whereas an endurance athlete can continue exercising for many hours at a time.

In order to appreciate how each of these systems function, you will explore the structure of the skeletal, muscular, cardiovascular, respiratory and energy systems as well as additional factors which affect sport and exercise performance. The anatomy and physiology of each body system and their processes are very different but work together to produce movement. You will gain a full appreciation of how the body is able to take part in sport and exercise through understanding the interrelationships between these body systems.

Summary of Assessment

This unit is externally set and marked by Pearson. The examination will be one hour and 30 minutes in length. The number of marks for the examination is 80. The paper will contain a number of short and long answer questions that will assess your understanding of the following topics:

- The skeletal system,
- The muscular system,
- The respiratory system,
- The cardiovascular system
- The energy system for sports performance.

You will use this knowledge and understanding to determine the interrelationships between body systems for sports performance.

Unit 1 - Assessment Outcomes

AO1 Demonstrate knowledge of body systems, structures, functions, characteristics, definitions and other additional factors affecting each body system

- **Command words:** describe, give, identify, name, state
- **Marks:** ranges from 1 to 5 marks

AO2 Demonstrate understanding of each body system, the short- and long-term effects of sport and exercise on each system and additional factors that can affect body systems in relation to exercise and sporting performance

- **Command words:** describe, explain, give, name, state
- **Marks:** ranges from 1 to 5 marks

AO3 Analyse exercise and sports movements, how the body responds to short-term and long-term exercise and other additional factors affecting each body system

- **Command words:** analyse, assess
- **Marks:** 6 marks

AO4 Evaluate how body systems are used and how they interrelate in order to carry out exercise and sporting movements

- **Command words:** assess, evaluate
- **Marks:** 6 marks

AO5 Make connections between body systems in response to short-term and long-term exercise and sport participation. Make connections between muscular and all other systems, cardiovascular and respiratory systems, energy and cardiovascular systems

- **Command words:** analyse, assess, discuss, evaluate, to what extent
- **Marks:** 8 marks

Unit 2 – Fitness Training and Programming for Health, Sport and Well-Being.

Unit Summary

You will explore client screening and lifestyle assessment, fitness training methods and fitness programming to support improvements in a client's health and well-being.

Unit Introduction

The health and fitness industry is concerned with helping to support clients to increase their fitness levels and also ensuring a client is in appropriate health to take on a fitness programme. To work in the health and fitness industry, staff need to know how to assess clients and then be able to plan appropriate training programmes to take into account individual needs.

In this unit, you will explore the process required for screening clients and assessing their lifestyle and nutritional intake. How to interpret this information will then be examined. From this information you will explore how to make judgements on a specific individual's current lifestyle and then suggest modifications to help improve the individual's fitness, health and overall well-being.

Fitness training methods will be examined for each component of physical and skill-related fitness. The selection of appropriate training methods for a selected individual and their application into a training programme will then be explored. In this unit, you will draw on your learning from across your programme to complete the assessment task.

Carrying out client screening and designing fitness training programmes is an essential skill for many people working in the sports industry, including sports coaches looking to improve an individual or team's sporting performance. Any person working in these careers would need to be able to carry out client screening and the design of training programmes in time-constrained conditions, utilising knowledge gained from previous experiences. This unit has been selected as an externally-assessed unit as it replicates the processes that are carried out in the industry, and as a synoptic unit as the knowledge and skills can be applied to the content of a number of units in the qualification.

Summary of Assessment

This unit will be assessed through a written task worth 60 marks. The task is set and marked by Pearson. The task will assess your ability to interpret lifestyle factors and health screening data from a scenario and stimulus information in order to develop and justify a fitness training programme and nutritional advice based on these interpretations.

The task will comprise two parts.

Part A - Will contain a scenario based on an individual who requires guidance on training, lifestyle, and nutrition upon which secondary research will be conducted. Part A will be released one week before the supervised assessment session (Part B).

Part B - You will then take your prepared research notes into the supervised assessment session (Part B), where you will be issued with supplementary stimulus information building on the scenario information in Part A. You will have two hours, under supervised conditions, to respond to the task. The two hour supervised assessment session must be taken in a period specified by Pearson.

Unit 2 – Assessment Outcomes

AO1 Demonstrate knowledge and understanding of the effects of lifestyle choices on an individual's health and well-being

AO2 Apply knowledge and understanding of fitness principles and theory, lifestyle modification techniques, nutritional requirements and training methods to an individual's needs and goals

AO3 Analyse and interpret screening information relating to an individual's lifestyle questionnaire and health monitoring tests

AO4 Evaluate qualitative and quantitative evidence to make informed judgements about how an individual's health and well-being could be improved

AO5 Be able to develop a fitness training programme with appropriate justification

Unit 3 – Professional Development in the Sports Industry

Unit Summary

You will explore the knowledge and skills required for different career pathways in the sports industry. You will take part in, and reflect on, a personal skills audit, career action plan and practical interview assessment activities.

Unit Introduction

The sports industry is a vast market with many different pathways. For a successful career, you need to understand the scope and breadth of the available opportunities and the steps needed to follow your chosen pathway.

In this unit, you will research the different possible careers and the associated job roles in the sports industry, then action plan your development towards achieving a selected career aim.

You will analyse your own skills and identify how to develop them into a career through the use of a career plan. You will research your chosen career to understand how to access and progress within it. You will take part in application and interview assessment activities for a selected career pathway, drawing on knowledge and skills from across the qualification to identify your own strengths and gaps in knowledge and skills. You will evaluate your own performance to gain an understanding of the generic employability and specific-technical knowledge and skills required to access and progress in a selected career pathway in the sports industry.

This unit will prepare you for progression to a career in the sports industry either directly or through higher education, by developing your understanding of investigation, career planning and awareness of the skills and qualities that sports employers look for in a potential employee.

Unit 3 – Learning Aims

- A** - Understand the career and job opportunities in the sports industry.
- B** - Explore own skills using a skills audit to inform a career development action plan.
- C** - Undertake a recruitment activity to demonstrate the processes that can lead to a successful job offer in a selected career pathway.
- D** - Reflect on the recruitment and selection process and your individual performance.

Unit 7 – Practical Sports performance

Unit Summary

Learners study the skills, techniques, tactics and rules of selected sports through active participation in individual/team sports.

Unit Introduction

Sports participation remains a key focus for the government, and sports governing bodies. Active lifestyles are part of a political agenda more than ever to improve the health of a nation, and to continue the success of many major sporting events which have been born through the National Lottery and UK Sport. For an individual to enjoy and fulfil their potential in any sport, it is important that they understand the rules/regulations, ethics of the sport and are able to prepare and participate in the sport. Clearly understanding the rules/laws, technical requirements, and reflection processes will help maximise performance no matter what level the individual performs at.

Unit 7 – Learning Aims

- A** Examine National Governing Body rules/laws and regulations for selected sports competitions
- B** Examine the skills, techniques and tactics required to perform in selected sports
- C** Develop skills, techniques and tactics for sporting activity in order to meet sport aims
- D** Reflect on own practical performance using selected assessment methods.

Research Activities

Over the summer period you are to work through these research tasks in order to prepare you for the course in September. You have research tasks for all four units.

Task Guidance

- All worked must be typed up
- It must be clearly labelled with each unit and what task is it.
- Any website or book that you use must be referenced (copy and paste the web site and / or write down the name of the book and author(s))

YEAR 11 INTO YEAR 12 BRIDGING PROJECT

BTEC SPORT Level 3

Bridging Project: Transition from Year 11 to Year 12 - BTEC Sport Level 3

Sport: _____ (Student's Choice)

Objective: The objective of this bridging project is to prepare Year 11 students for the transition into Year 12 for BTEC Sport Level 3 by focusing on anatomy and physiology concepts and the rules of a sport of their choice.

Task 1

- a) Research the musculoskeletal system and its functions. Identify the major bones, muscles, and types of joints in the body and a brief description/ where they are located.

Major bones (17)

Muscles (21)

Joints (6)

B) How do bones muscles and joint work together to create movement using a specific example in a sport of your choice?

C) Choose one physiological system (e.g., cardiovascular, respiratory, or nervous system) and explain its role in your chosen sport. How does this system contribute to performance during the game? Provide examples.

Task 2

Below are a number of key terms/words that are essential for the first two modules that will be started in September. The task is:

1. Research each key term/word and find a simple definition that you understand. Write this out in your own words.
2. Then use a diagram or explanation or practical example to illustrate this term/word in the context of PE/sport to show you fully understand what it actually means.
3. Revise & learn your definition as this will be tested in September within the first weeks of the term with Mr Blake (Anatomy & Physiology) and Mr Robinson (Skill Acquisition).

Applied Anatomy and Physiology:

1. Aerobic respiration
2. Anaerobic respiration
3. Anticipatory rise <https://www.youtube.com/watch?v=9PD6ESjqVZg&t=129s>
4. Articulating bones
5. Arterio-venous oxygen difference (A-VO₂ diff)
https://getrevising.co.uk/diagrams/arterio_venous_oxygen_difference_a_vo2
6. Axis
7. Calcium
8. Cardiac conduction system <https://www.bbc.co.uk/bitesize/guides/zrrry9q/revision/5>
9. Concentric muscle contraction
10. Diffusion
11. Eccentric muscle contraction
12. Excess post-exercise oxygen consumption (EPOC)
https://www.youtube.com/watch?v=t2VD_HKNhQ
13. Glycogen
14. Insertion
15. Mitochondria
16. Origin
17. Oxygen deficit
18. Plane <https://www.youtube.com/watch?v=moP483UxRQ8>
19. Receptors <https://www.youtube.com/watch?v=9PD6ESjqVZg&t=129s>
20. VO₂ max <https://www.teachpe.com/anatomy-physiology/vo2-max>
21. Viscous
22. Partial pressure

Skill Acquisition:

1. Skill <https://www.youtube.com/watch?v=IYcbtd6v7mA>
2. Open skill
3. Closed skill
4. Self-paced skill
5. Eternally paced skill
6. Fine skill
7. Gross skill
8. Continuous skill
9. Discrete skill
10. Serial skill
11. Reaction Time <https://www.topendsports.com/testing/reactime.htm>
12. Rules
13. Codification
14. Etiquette
15. Technique
16. Tactics
17. Isolated tactic
18. Conditioned tactic
19. Notational analysis
20. Plateau
21. Perception
22. Types of skill
23. NGB's
24. International sporting federation
25. SMART targets
26. Responsibilities of an official

Task 3

The following activities will enable you to prepare for Level 3 study by building on the prior learning gained from topics as part of your GCSE course.

Applied Anatomy and Physiology Activities:

A. The Musculoskeletal System and movement analysis

Answer the following questions for the movements involved in a press-up.

1. Perform the downward phase of a press-up.
 - What is happening at the elbow joint?
 - Which muscle is contracting?
 - What type of contraction is it performing?
2. Now perform the upward phase of a press-up.
 - What is happening at the elbow joint?
 - Which muscle is contracting?
 - What type of contraction is it performing?
3. Try to hold the press-up in the downward phase.
 - Which muscle feels as if it is contracting?
 - What type of contraction is it performing?

Answer the following questions for the movements involved in a squat.

4. Perform the downward phase of a squat.
 - What is happening at the knee joint?
 - Which muscle is contracting?
 - What type of contraction is it performing?
5. Now perform the upward phase of a squat.
 - What is happening at the knee joint?
 - Which muscle is contracting?
 - What type of contraction is it performing?
6. Try to hold the squat in the downward phase.
 - Which muscle feels as if it is contracting?
 - What type of contraction is it performing?

Answer the same questions for a movement of your choice that involves using the shoulder joint.

Task 4

The Cardiovascular System

Answer the following questions to check that you understand how the heart functions as this will help your understanding of more complex aspects of the study of the cardiovascular system.

Questions rely on your basic study of the heart from the GCSE course:

1. Name the 4 chambers of the heart.
2. Which chambers are larger? Explain why.
3. Which side of the heart is larger? Explain why.
4. Name the main blood vessels that enter and leave the heart.
5. What are the names of the valves in the heart and where are they located?
6. What is the main function of valves?
7. Starting at the venae cavae, place the following structures in the correct order that a red blood cell would pass on its journey through the heart.

Aorta	Left ventricle	Lungs	Pulmonary artery	Bicuspid valve
Right ventricle	Left Atrium	Tricuspid valve	Right Atrium	Pulmonary vein

The respiratory System

Rearrange the following words to show the correct passage of air:

Larynx nose trachea pharynx alveoli bronchioles bronchi

Draw a simple diagram to show the movement of oxygen from the alveoli to the muscles and carbon dioxide from the muscles to the alveoli. On this diagram label the partial pressures of oxygen and carbon dioxide and show the diffusion directions.

Explain why the partial pressure of O₂ and CO₂ is important in the diffusion of these gases for a football player to be able to make use of their stamina.

Task 5: Unit 7 Practical Performance

Task A) Give a summary of 5 rules/regulations for your chosen sport

Rule/Regulation:	Summary of Rule/Regulation:
1)	
2)	
3)	
4)	
5)	

Task B) Give 2 examples of attacking & defensive tactics & explain its characteristics

Defensive Tactics	
Example	Explanation
Attacking Tactics	

Task C) Define each type of skill and give examples of these in a Team Sport & Individual Sport	
Type of skill:	Examples Team Sport & Individual Sport:
Open	
Closed	
Fine	
Gross	
Continuous	
Discrete	
Serial	
Attacking	
Defensive	

Note: This bridging project is designed to provide students with a foundation in anatomy and physiology concepts while familiarizing them with the rules and regulations of their chosen sport. It encourages critical thinking, research skills, and the application of knowledge to practical scenarios. Feel free to adapt the tasks and questions to suit the specific needs and requirements of your school's BTEC Sport Level 3 program.