ise research portfolio

our vision

“...to be recognised as a high quality research centre in the field of sport and exercise science...”
## ise research portfolio

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The Institute of Sport and Exercise (ISE) is committed to undertaking high quality research projects within the areas of clinical exercise science and exercise and training science. The focus is on applied research leading to the development of protocols, guidelines and standards for health improvement and sporting excellence.

Research work undertaken can be divided into three areas:

• Specialist group activities (eg people with cancer, participants of cardiac rehabilitation programmes and children)
• Recreational group activities (eg exercise programme, walking campaign, health services)
• Elite group activities (ie elite athletes and performance sport)

This portfolio serves to document previous and ongoing research topics carried out by ISE staff.

Abbreviations

ISE Institute of Sport and Exercise
ACSM American College of Sports Medicine
BASES British Association of Sport and Exercise Science
### staff qualifications

<table>
<thead>
<tr>
<th>Staff</th>
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</table>
| **Brian Ewing (BE)**      | Director  
BEd (Hons): Physical Education  
MSc: Exercise Physiology  
SFA: ‘A’ Licence  
SFA: Staff Coach |
| **Paul McPate (PM)**      | Assistant Director  
BEd (Hons): Physical Education and Human Movement  
MSc: Town and Regional Planning  
UKSCA: Accredited Strength & Conditioning Coach  
SVA: Club Coach  
SVA: Staff Tutor and UKCC Assessor |
| **Audrey Duncan (AD)**    | Sports Science Manager  
BSc (Hons): Physiology and Sports Science  
PhD: Sport and Exercise Science  
NSCA: Certified Strength and Conditioning Coach  
UKSCA: Accredited Strength and Conditioning Coach  
ISAK: Level 2 Accredited Anthropometrist  
BASES: Chartered Scientist |
| **Helen Weavers (HW)**    | Sport & Exercise Physiologist  
BSc (Hons): Sport and Exercise Science  
MSc: Sport and Exercise Science  
UKSCA: Accredited Strength & Conditioning Coach  
BASES: Accredited Physiologist  
ISAK: Level 1 Accredited Anthropometrist  
BASES: Chartered Scientist |
| **Hazel Ednie (HE)**      | Seniors and Active Living Programme Manager  
BEd (Hons): Physical Education  
Fitness Scotland National: Registered Grade 1 Instructor  
BACR: Phase IV Exercise Instructor  
GTC Registered  
Basic Moves (Level 1 tutor)  
REPS Instructor  
CanRehab Level 4 Exercise Instructor |
section three • past research activities of **ISE** staff

Current **ISE** staff have been involved in a wide range of research activities in the past which encompasses recreational group, specialist group and elite sport activities.

- Recreational group activities have included the planning and provision of sports facilities and increasing walking in sedentary females.
- Specialist group activities have included physical activity in children and adherence to phase IV cardiac rehabilitation programmes.
- Elite sport activities have included physiological profiles of footballers, ice hockey players, golfers and ultra-endurance athletes. Another focus area has been the impact of strength training on golfers and footballers.

section four • current research activities of **ISE** staff

This table documents the current research involvement of **ISE** staff.

**Table 1: Current research activities of **ISE** staff**

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<th>Specialist group activities</th>
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<th>Elite group activities</th>
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<td><strong>AD</strong></td>
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<td>Joint researcher on Projects with <strong>HW</strong></td>
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<td><strong>Project 1</strong></td>
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<tr>
<td></td>
<td></td>
<td>An evaluation of a school based intervention programme to increase physical activity levels.</td>
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<td><strong>Project 2</strong></td>
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<td></td>
<td></td>
<td>Physiological Profiles of youth footballers</td>
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<td><strong>Project 3</strong></td>
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<td>Physical activity levels of newly matriculating undergraduate students of the University of Dundee</td>
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<tr>
<td><strong>HW</strong></td>
<td></td>
<td>Joint researcher on Projects with <strong>AD</strong></td>
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<td><strong>Project 1</strong></td>
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<td></td>
<td></td>
<td>The impact of a strength training programme on youth footballers</td>
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section five • grant funding

**ISE** has successfully secured significant grant funding in full from Diabetes UK, Macmillan and the SportsScotland Institute of Sport. In addition, **ISE** has also received collaborative grant funding from agencies that include Tenovus Scotland, The NHS, Medical Research Council, European Commission and Paths to Health.
Research publications and abstract presentations are documented below.
(including research undertaken in [ISB] by previous staff members)

### 6.1 Specialist group activities

#### 6.1.1 Scientific publications


#### 6.1.2 Book chapters/scientific documents

Presented at The European Association for the Study of Diabetes Annual Conference 2001 (Glasgow, UK)
6.2 Recreational group activities

6.2.1 Scientific publications


6.3 Elite group activities

6.3.1 Scientific publications


6.3.2 Book chapters/scientific documents

6.3.3 Presented abstracts

1. Weavers HM. How do we provide students with the best chance of getting on the career ladder: are internships the answer? Presented at the International Conference on Enhancement and Innovation in Higher Education. Glasgow, 2013.


The most recent 5 years of Sports Biomedicine honours research thesis, supervised by **ISE** staff are documented below.

### 7.1 2009/2010

1. Norton D. The impact of strength training on the physical performance of elite youth football players. Supervised by Dr Audrey Duncan and Miss Helen Weavers
2. Drummond N. Physiological monitoring and an intervention programme for elite youth football players. Supervised by Dr Audrey Duncan and Miss Helen Weavers
3. Ward R. The evaluation of a performance centre model. Supervised by Dr Audrey Duncan and Miss Helen Weavers

### 7.2 2010/2011

1. Shaw, A. The effect of an 8 week strength training programme on the physiological profiles of male youth footballers. Supervised by Miss Helen Weavers and Dr Audrey Duncan.
2. Skelton, K. Do the current training methods of a youth football squad meet the demands for competitive match play? Supervised by Miss Helen Weavers and Dr Audrey Duncan.
3. Brooks, M. An investigation of the effects of high intensity training and steady state training on performance in the Yo-Yo Intermittent Recovery Level 1 Test. Supervised by Miss Helen Weavers and Dr Audrey Duncan.
4. Williams, R. Are high intensity interval and/or steady state training effective in improving aerobic capacity as assessed by the 20m Multi Stage Fitness Test? Supervised by Miss Helen Weavers and Dr Audrey Duncan.
5. Dargie, A. A study of the long term physical and psychological effects of an exercise intervention in cancer survivors. Supervised by Dr Anna Campbell
6. Thomas, L. Six month follow up of a community based exercise and lifestyle programme for cancer patients post treatment. Supervised by Dr Anna Campbell

### 7.3 2011/2012

1. Wilkinson, H. An evaluation of the Scottish Football Association Schools Initiative Programme. Supervised by Dr Audrey Duncan and Miss Helen Weavers.
2. Finlay, C. The impact of flexibility training on golf performance. Supervised by Miss Helen Weavers and Dr Audrey Duncan.
4. McDougall, C. Dissertation: Potential Mechanisms by which Physical Activity may reduce the risk of cancer recurrence. Supervised by Dr Anna Campbell.
5. Juchniewicz, H. Evaluation of Active ABC Programme. Supervised by Dr Anna Campbell.
1. Craig, N. An evaluation of the efficacy of an SFA school based intervention programme to increase physical activity levels. Supervised by Dr Audrey Duncan and Miss Helen Weavers.

2. Grewar, J. Physical activity levels of newly matriculated undergraduate students at the University of Dundee. Supervised by Dr Audrey Duncan and Miss Helen Weavers.

3. Greenhill, E. A comparison of the physiological profiles of full and part-time youth football academy players. Supervised by Dr Audrey Duncan and Miss Helen Weavers.

4. Davidson, N. An evaluation of training and match demands through physiological monitoring of youth football. Supervised by Miss Helen Weavers and Dr Audrey Duncan.

5. Melvin, M. The impact of an 'Active Living' module on the physical activity levels of undergraduate students at The University of Dundee. Supervised by Miss Helen Weavers and Dr Audrey Duncan.

6. Wilson, V. The effect of a strength training programme on prostate cancer survivors. Supervised by Dr Anna Campbell.

7. Smart, S. An evaluation of the Active ABC programme. Supervised by Dr Anna Campbell.

8. Lakeland, K. An evaluation of the Active ABC programme. Supervised by Dr Anna Campbell.

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1. McKane, M. An evaluation of impact of the SFA ‘School of Football’ programme in a Dundee High School on the physical activity and health of those involved. Supervised by Dr Audrey Duncan and Miss Helen Weavers.

2. MacKinlay, D. A study of the physical activity if first year students over semester 1 at the University of Dundee 2013. Supervised by Dr Audrey Duncan and Miss Helen Weavers.

3. Dunbar, A. The physiological profile of an elite under 13 and under 14 youth footballer in Scotland. Supervised by Dr Audrey Duncan and Miss Helen Weavers.

4. Richards, J. The physiological profile of an elite under 15 and under 17 youth footballer in Scotland. Supervised by Miss Helen Weavers and Dr Audrey Duncan.

5. MacDonald, O. The impact of a strength training programme on injury prevention in youth footballers. Supervised by Miss Helen Weavers and Dr Audrey Duncan.

6. Conway, R. The impact of an 8 week strength training programme on youth footballers. Supervised by Miss Helen Weavers and Dr Audrey Duncan.

7. Willets, B. Potential mechanisms by which physical activity may reduce the risk of cancer recurrence. Supervised by Dr Anna Campbell.


9. Davidson, C. The comparison of ‘Paths for All’ and a ‘Macmillan Move More’ home based programmes for impacting on physical activity levels of breast cancer survivors. Supervised by Dr Anna Campbell.
All general enquiries concerning the research programme should be made, in the first instance, to Dr Audrey Duncan.

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