Education and Training Review:
Durban University of Technology

Damien Askew
Medical Orthotist & Prosthetist
Head of Department
Main Lecture rooms and computer labs

Orthopaedic Services KZN-DOH

Practical Laboratories and Gait lab.
DUT – Medical Orthotics and Prosthetics

Background History

- **Collaboration**
  - The Faculty of Health Sciences was approached in 2010 by the Human Resources Development (HRD) division of the KwaZulu-Natal Department of Health (KZN DOH) to consider offering an Orthotics and Prosthetics training programme at the Durban University of Technology (DUT).
  - Retiring age staff as well as general shortage of suitably trained Orthotics and Prosthetics personnel in the province.
  - Diverse population groups and clinical requirements.
  - 40 monthly clinics throughout the province of KZN-11 districts.
Curriculum, Content and Outcomes: Durban University of Technology

- **Overview:**
  - Bachelor of Health Sciences in Medical Orthotics and Prosthetics
  - Professional Bachelor’s Degree exit level 8.
  - Officially commenced July 2013 with 32 students with full KZN-DOH bursaries.
  - Selection based on previously mentioned districts and student background.
  - 30 modules offered that encompass primary, clinical and professional levels of MOP education.
  - Current student cohort is 90 students, with intakes in January 2014 & 2015.
Courses and Qualifications offered Durban University of Technology

<table>
<thead>
<tr>
<th>Course / Qualification:</th>
<th>Annual Student intake:</th>
<th>Ave. Annual Graduates</th>
<th>HEQF level:</th>
<th>Duration in years:</th>
<th>Credits:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctorate: (in development)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Masters Degree:</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Bachelor Degree:</td>
<td>30</td>
<td>n/a</td>
<td>8</td>
<td>4</td>
<td>512</td>
</tr>
<tr>
<td>Diploma: (in development)</td>
<td>Approx 20 p/a</td>
<td>0</td>
<td>6</td>
<td>2</td>
<td>240</td>
</tr>
<tr>
<td>Certificate:</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>&lt;Other – specify&gt;</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Curriculum, Content and Outcomes: Durban University of Technology

- **Summary / Overview:**
  - First degree graduates July 2017.
  - Diploma graduates anticipated in January 2018. (subject to DOHET, CHE, & HPCSA approval of programme)
Outcomes and graduate attributes developed.

• The purpose of this qualification is to develop a graduate competent in the knowledge; attitudes, insight and skills required for the orthotic and prosthetic professions.

• The qualifying graduate will be able to competently apply and integrate theoretical principles, evidence-based techniques, practical experience, clinical procedures and appropriate skills.
Curriculum, Content and Outcomes: Durban University of Technology

Outcomes and graduate attributes developed.

• The programme of study will produce a well-rounded graduate who will be capable of practicing as a clinician, developing and managing a clinic or a laboratory or provide services as a private practitioner. The learner will be a team player capable of working in multidisciplinary teams and move the profession forward.

Demonstrate effective communication and apply the principles of medical ethics, professional behaviour and the legal framework to the context within which orthotic and prosthetic practitioners operate while maintaining personal health, wellness and safety.
Curriculum, Content and Outcomes: Durban University of Technology

Outcomes and graduate attributes developed.

• Independently assess, prescribe, practice, supervise, evaluate and facilitate the provision of orthotic and prosthetic care independently in a wide range of contexts utilising specialised strategies and technologies.

• Demonstrate an understanding of the management, structure and function of orthotic and prosthetic service systems in Southern Africa and provide operational and clinical supervision within an orthotic and prosthetic local as well as international environment.
Curriculum, Content and Outcomes: Durban University of Technology

Outcomes and graduate attributes developed.

• Reflect as practitioner lifelong learning within the orthotic and prosthetic profession and transform health care environments by means of continual professional development.

• Patient, best practice focused, clinicians......

Infrastructure and Equipment

Custom designed and fitted Laboratories

The plaster laboratory
Infrastructure and Equipment

Custom designed and fitted Laboratories

The welding room
Infrastructure and Equipment

Custom designed and fitted Laboratories

Infrastructure and Equipment

Custom designed and fitted Laboratories
Infrastructure and Equipment

Custom designed and fitted Laboratories

EMPOWER THE DISABLED, EMPOWER THE REGION
Infrastructure and Equipment

Custom designed and fitted Laboratories

Curriculum and content

- Year 1
  - Physics
  - Mathematics
  - Anatomy 1
  - Material Science
  - Biomechanics 1
  - Principles of Orthotics and Prosthetics 1
  - Clinical Practice 1
  - Cornerstone- General Education
Curriculum and content

• Year 2
  – Anatomy 2
  – Physiology for MOP
  – Electronics
  – Ethics and Medical Law
  – Computers and Graphical Communication
  – Biomechanics 2
  – Principles of Orthotics and Prosthetics 2
  – Clinical Practice 2
  – Community Healthcare and Research – Introduction

• Year 3
  – Clinical Studies 1
  – Basic Pharmacology
  – Psychology
  – Biomechanics 3
  – Principles of Orthotics and Prosthetics 3
  – Clinical Practice 3
  – Community Healthcare and Research – Intermediate
Curriculum and content

- **Year 4**
  - Clinical Studies 2
  - Clinic, Laboratory and Business Management
  - Clinical Practice 4A-(Orthotics)
  - Clinical Practice 4B-(Prosthetics)
  - Community Healthcare and Research –Advanced
  - Advanced Clinical Practice

Strategy and Direction:
Durban University of Technology

**Strategy, Direction, Focus areas for next 5 years:**

- Achieve the student intake in terms of the collaborative plan agreed upon with the KZN-DOH at least 100-120 students over 5 years.
- Development of a Technicians Programme/ Mid level worker to provide support to clinical staff both in public and private sectors.
- Maintain a high institutional standard in line with ISPO, to seek ISPO certification for Category 1 and Category 3.
Strategy and Direction:
Durban University of Technology

Strategy, Direction, Focus areas for next 5 yrs:

• Teaching and learning in the Bachelor of Health Science in Medical Orthotics and Prosthetics degree will be undertaken through a practical and interactive approach where students experience and learn innovative approaches and responses in the field of medical Orthotics and Prosthetics.

• Current methods as well as fundamental foundational skills as well as interaction with local and international suppliers

Financial Costs and Resourcing
Durban University of Technology

<table>
<thead>
<tr>
<th>Course / Qualification:</th>
<th>Course Fee:</th>
<th>Course Cost to Deliver:</th>
<th>Subsidy / Government Support Grant earned:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctorate:</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Masters Degree:</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Bachelor Degree:</td>
<td>+ R40 000pa</td>
<td>+R2.5m-R3.5m</td>
<td>n/a</td>
</tr>
<tr>
<td>Diploma:</td>
<td>TBC</td>
<td>TBC</td>
<td>TBC</td>
</tr>
<tr>
<td>Certificate:</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>&lt;Other – specify&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Education and Training Gaps:
Durban University of Technology

• Known Gaps or Challenges in Education and Training:
  – **Limiting performance**...at present, programme requires constant development.
  – Every module or subject is new and needs to be assimilated and enhanced to an acceptable standard.
  – Specialist instructors are required, not many have an academic background. All staff have to register for a Masters.
  – **Limiting scale**...the unknown growth of the programme and collaboration with the KZN-DOH.....5 years time independent development and funding??
  – Growth of the programme provision of training to other provinces and SADC countries.

Durban University of Technology

**Summary:**
• 4 year Professional Bachelors Degree.
• Clinical approach with fundamental and practical focus.
• Best practice and research based facilitation.
• Open to collaboration with other academic institutions and countries.
• Aspire to international standards.
• Thank you....
Durban University of Technology

Any Questions???