



Higher National Unit specification

General information for centres

Unit title: Speech and Language Therapy: Anatomy and Neurology for Human Communication

Unit code: F3SB 34

Unit purpose: This Unit provides candidates with an understanding of the anatomy of the head, neck and chest and with a scientific basis for understanding the production of speech and swallowing. The Unit also provides candidates with an understanding of the anatomy and functions of the brain and spinal cord and the role of the central nervous system in sensory perception and motor control.

On completion of the Unit the candidate should be able to:

- 1 Identify and describe the structure and functions of the larynx, head, neck and thorax relevant to speech production and pathology.
- 2 Identify and describe structures, organisation and functions of the nervous system.
- 3 Describe sensory and motor pathways in relation to speech and language disorders and dysphagia.

Credit points and level: 1 HN credit at SCQF level 7: (8 SCQF credit points at SCQF level 7*)

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

Recommended prior knowledge and skills: All candidates should have current knowledge of a working speech and language therapy department and working with speech and language therapy clients. This award may be particularly relevant to individuals who have achieved a relevant SVQ at level 3 eg in G8A5 23 *AHP Support, Diagnostic and Therapeutic Support*, G7LP 23 *Health and Social Care (Adults)*, G7LV 23 *Health and Social Care (Children & Young People)* or have equivalent knowledge and experience. Candidates should have good communication skills.

Core Skills: There are opportunities to develop the Core Skill of *Communication* at SCQF level 5 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Context for delivery: If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

Assessment: The assessment for this Unit will be by restricted response questions including labelling of diagrams and multiple choice questions under closed-book conditions. There will be two instruments of assessment, one addressing Outcomes 1 and 2 and the other addressing Outcome 3.

Higher National Unit specification: statement of standards

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The sections of the Unit stating the Outcomes, Knowledge and/or Skills, and Evidence Requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the Knowledge and/or Skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Identify and describe the structure and functions of the larynx, head, neck and thorax relevant to speech production and pathology

Knowledge and/or Skills

- ◆ The structure and functions of the nasal cavity, oral cavity including mandible and temporomandibular joint, palate and pharynx and relevant pathology
- ◆ The larynx, its structure, muscles and movement including voice production and pathology
- ◆ The trachea and thorax, including lungs, chest wall, diaphragm and their role in breathing
- ◆ The relevance of each of the above to the three stages of swallowing and dysphagia

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ identify the structure and functions of the nasal cavity, oral cavity including mandible and temporomandibular joint, palate and pharynx that are of particular relevance to speech production and pathology
- ◆ identify the structure and describe the functions of the larynx which are of particular relevance to voice production and pathology
- ◆ identify the structure and describe the functioning of the trachea and thorax in relation to breathing
- ◆ describe the three stages of the normal swallow and recognise at least three ways in which it can be disordered in dysphagia

Assessment Guidelines

Candidates may be asked to label diagrams of the head, neck, larynx and thorax and identify true/false statements relating to speech and voice production swallowing and dysphagia. Candidates may also be required to provide short answers pertaining to the functions of anatomical structures of the head, neck, larynx and/or thorax.

Higher National Unit specification: statement of standards (cont)

Unit title: Speech and Language Therapy: Anatomy and Neurology for Human Communication

Outcome 2

Identify and describe structures, organisation and functions of the nervous system

Knowledge and/or Skills

- ◆ Overview of the central and peripheral nervous system and sensory and motor pathways
- ◆ Organisation of the nervous system including cerebral hemispheres, hemispheric specialisation, cortical localisation, Wernickes and Brocas areas
- ◆ The brain stem and cranial nerves
- ◆ Blood supply to brain and ways in which the supply can be disrupted

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ identify the overall organisation and functions of the central and peripheral nervous system and sensory and motor pathways
- ◆ identify key structures of the human brain relevant to speech and language production
- ◆ recognise the function of cranial nerves and the significance of the brain stem
- ◆ describe the basic mechanism of blood supply to the brain and disruptions such as clots or haemorrhages

Assessment Guidelines

Assessment of this Outcome could be combined with Outcome 1. Candidates may be asked to label diagrams of the brain. Candidates can be asked to provide restricted response short answers which can include which cranial nerve may be damaged with a given symptom, causes of disruption to blood supply of brain and functions of sensory and motor pathways.

Higher National Unit specification: statement of standards (cont)

Unit title: Speech and Language Therapy: Anatomy and Neurology for Human Communication

Outcome 3

Describe sensory and motor pathways in relation to speech and language disorders and dysphagia

Knowledge and/or Skills

- ◆ Aphasia
- ◆ Dysarthria
- ◆ Apraxia/dyspraxia
- ◆ Dysphagia
- ◆ Effects on communication skills of expressive and receptive aphasia
- ◆ Effects on communication skills of dysarthria and apraxia/dyspraxia.

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ identify the mechanisms of damage to the nervous system which can result in aphasia
- ◆ identify three possible causes of damage to the nervous system which can result in dysarthria
- ◆ identify three possible causes of damage to the nervous system which can result in apraxia/dyspraxia
- ◆ identify the mechanisms of damage to the nervous system which can result in dysphagia
- ◆ compare the effects on communication skills of expressive aphasia and receptive aphasia
- ◆ describe three possible effects on communication skills of dysarthria or apraxia/dyspraxia

Assessment Guidelines

This could be assessed by a series of short video clips or case studies where candidates would be expected to recognise and describe the three main communication disorders and dysphagia. The case studies used in the Speech and language therapy principles and practice Unit could also be used in this Unit.

Administrative Information

Unit code: F3SB 34

Unit title: Speech and Language Therapy: Anatomy and Neurology for Human Communication

Superclass category: PB

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Higher National Unit specification: support notes

Unit title: Speech and Language Therapy: Anatomy and Neurology for Human Communication

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

This Unit is intended to provide the candidate with knowledge of anatomy of head and neck, neurology and connection with speech and language and swallowing disorders that can be caused by neurological damage.

The Unit may be taught by anatomy and neurology specialists but to help candidates contextualise their learning it may be useful to include specialist lectures from speech therapists working in related fields such as working with people with cerebral palsy, cleft palate, acquired neurological disorders and/or voice disorders. This would also assist ensure the content is kept relevant to candidates working with both adult and child clients.

It is expected that the following conditions would be covered within this Unit: cerebral palsy, Motor Neurone Disease, Multiple Sclerosis, Parkinson's disease, Huntingdon's disease, stroke, brain/head injury, brain tumours, and head and neck cancers.

Outcome 1

This Outcome focuses and develops on the knowledge acquired in physiology for health care. Outcome 1 focus is on the structure and functioning of the head and neck and the relevance to speech and voice production. It will provide candidates with the knowledge of anatomical basis to speech, voice and swallowing pathologies.

Outcome 2

This Outcome focuses on the nervous system including the brain, brain stem, cranial nerves, spinal cord, periphery nervous system including how messages are sent and received via sensory and motor pathways and blood supply to the brain.

It is not expected to have an in depth knowledge of each of these however it would be useful to have an appreciation of the importance of the role played in speech production and pathology. For example, in relation to the cranial nerves it is advised that tutors focus on cranial nerves with particular relevance to speech pathology and swallowing eg numbers 5, 7, 9, 10 and 12. It is not necessary to identify each one.

Outcome 3

This Outcome intends to assist the candidate to understand the underlying anatomical and/or neurological causes of individuals' communication disorders. It also covers the neurological and/or anatomical basis of swallowing difficulties. Candidates will need to evidence their understanding of the differences between aphasia, apraxia/dyspraxia, dysarthria and dysphagia.

Higher National Unit specification: support notes (cont)

Unit title: Speech and Language Therapy: Anatomy and Neurology for Human Communication

Guidance on the delivery and assessment of this Unit

This Unit is likely to form part of a Group Award, which is primarily designed to provide candidates with knowledge and skills to work with people in need of speech and language therapy input. It is recommended that this Unit is delivered after the *Speech and Language Therapy — Principles and Practice* Unit as this Unit builds on the range of clients a therapist may work with and provides more detailed information about speech and language therapy diagnoses such as apraxia/dyspraxia, dysarthria and aphasia. It is also recommended that the Unit is delivered after the *Physiology for Health Care* Unit which will provide an overview of the structure and functions of human biology. This Unit develops the knowledge gained by specialising in the head and neck.

Anatomy and neurology are factual subjects and many candidates will develop their knowledge through rote learning. This has influenced the assessment format by having Outcomes 1 and 2 assessed by multiple choice and short answers and using video clips or case studies to assess Outcome 3.

Opportunities for developing Core Skills

There are opportunities to develop the Core Skill(s) of *Communication* at SCQF level 5 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Communication: will be evidenced via the candidates' work with individuals and groups. Group discussions will be particularly important.

Open learning

It is fully expected that as much of this Unit as possible will be appropriate for delivery in a blended learning format for example the video clips if used may be accessed via online facilities.

Candidates with disabilities and/or additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering alternative Outcomes for Units. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (www.sqa.org.uk).

General information for candidates

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This Unit will provide you with knowledge of anatomy of head and neck, neurology and connection with speech and language disorders that can be caused by neurological damage.

It is likely to include lectures from speech and language therapists working in related fields such as working with people with cerebral palsy, cleft palate, acquired neurological disorders and/or voice disorders. The content is relevant to you whether you work with adults and/or children.

It is expected that the following conditions would be covered within this Unit: cerebral palsy, Motor Neurone Disease, Multiple Sclerosis, Parkinson's disease, Huntingdon's disease, Stroke, brain/head injury, brain tumours, and head and neck cancers.

The Unit will be assessed in two ways: short answer restricted response questions including multiple choice and video clips and/or case studies showing different people experiencing communication disorders.

On completion of the Unit you should be able to:

- ◆ identify and describe the structure and functions of the larynx, head, neck and thorax relevant to speech production and pathology
- ◆ identify and describe structures, organisation and functions of the nervous system
- ◆ describe sensory and motor pathways in relation to speech and language disorders and dysphagia