Higher Nationals in Computing

Sector Network Event (Online)
May 2020

Aims of this Event

- **Explore subject-related resources** available through HNGlobal and other useful online sources to support adapted delivery

- **Review** national updates and sector guidance useful for planning, delivery and assessment

- **Understand** HN Assessment and Awarding updates and guidance for your programme

- **Share and discuss** resources and strategies that you have found useful

- **Get answers** to common questions from Pearson subject matter experts

Exploring Online Resources to Support Learning in Computing, HN Global & other websites

Dedicated online learning platform for all BTEC Higher National students and centres.

- **Textbooks and Resource Areas** - created to support your subject core units
- **Careers Centre** – where students can build on their employability skills
- **Short Courses** (including Study Skills) - learn key transferable skills
- **Global Forum** - discuss common themes
- **Student Channel** - informative clips for your Higher National
- **Tutor Channel** – informative clips to support assessment and delivery
- **Reading Lists** - list of recommended resources for your programme
- **Delivery Materials** - resources to support tutors *(tutor access only)*

How can you sign-up?
Signing up is simple, you just need to complete a short self-registration form to create your own account, which will grant you access to the resources available to support your programme.

Visit HN Global today!

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This module is designed to give students an understanding of the role of the Study Skills programme for their course.

STUDY SKILLS   START ›

Getting Organised for Study

FREE

STUDY SKILLS   START ›

Writing For Your Higher National Course

Reading, Note-taking & Summarising

HN students who use HN Global are even more satisfied with their course

72% have positive feelings towards the use of HN Global
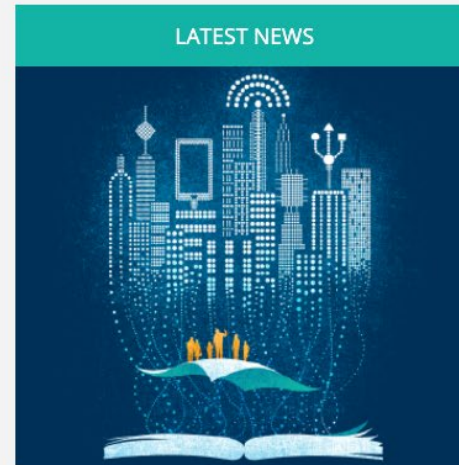
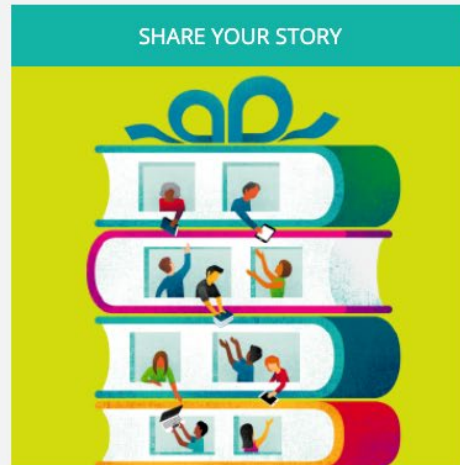**69%** find HN Global useful in supporting their studies

Research by:
djs research

HN GLOBAL

Delivery Materials   Tutor Channel   Reading Lists

Blended Learning   Forum   Professional Development

Enter WorldSkills UK skills competitions

2 March - 5 May

Welcome to HN Global, a community designed to support you on your BTEC Higher National journey.

| HN GLOBAL MAP | SHARE YOUR STORY | LATEST NEWS |

HN GLOBAL

Career Centre   Core Textbooks   Degree Finder

E-Library   Student Channel   Student Resources

Student Support

Study Gui

❮ Guides designed to help navigate you through the content essential to a selection of units.

EXPLORE NOW ❯

Welcome to HN Global, a community designed to support you on your BTEC Higher National journey.

HN GLOBAL MAP   SHARE YOUR STORY   LATEST NEWS

Short Courses

Introduction To Study Skills

FREE

STUDY SKILLS   START ❯

Getting Organised for Study

FREE

STUDY SKILLS   START ❯

Finding And Evaluating Information

FREE

STUDY SKILLS   START ❯

Writing For Your Higher National Course

FREE

STUDY SKILLS   START ❯

Reading, Note-taking & Summarising

FREE

STUDY SKILLS   START ❯

Giving Effective Presentations

FREE

STUDY SKILLS   START ❯

Human Skills: Webinar Series

All Subjects

Aeronautical Engineering:
- 🟢 Subject Page
- 🟣 Delivery Materials

Agriculture:
- 🟢 Subject Page
- 🟣 Delivery Materials

Animal Management:
- 🟢 Subject Page
- 🟣 Delivery Materials

Applied Sciences:
- 🟢 Subject Page
- 🟣 Delivery Materials

Art and Design:
- 🟢 Subject Page
- 🟣 Delivery Materials

Business:
- 🟢 Subject Page
- 🟣 Blended Learning
- 🟣 Delivery Materials

Computing:
- 🟢 Subject Page
- 🟣 Delivery Materials

Construction:
- 🟢 Subject Page
- 🔵 NEW: Study Guides
- 🟣 Delivery Materials

and the Built Environment ❯
- 🟣 Delivery Materials

COMPUTING

Welcome to the HN Global community. As a BTEC Higher National student in Computing you have access to a number of resources to support you across your course.

Here are some suggested resources for you to use throughout your learning journey. We recommend you follow the Get Started section first, but you can access any of the resources, at any time.

GET STARTED ▶

> Speak to other students across the world in the **Lounge**
> Understand the role of study skills by taking the **Introduction Module**
> Understand your motivations & values through **Career Assessments**
> Create and follow tasks through the **Career Planner**
> Review your recommended **Reading List**
> **Get Organised for Study** by setting goals and time management tips

LEARN ▶

> Rent key texts located in the **E-Library**
> Browse the **Short Courses** for supplementary modules to support your course

edit

TEXTBOOK ›
edit

READING LIST ›
edit

FORUM ›
edit

STUDY SKILLS ›
edit

CAREERS CENTRE ›

Computing Core Textbook

View   Edit   Nodequeue

Access your
programme core textbook today!

This textbook provides you with the key resources to help you complete the core units of the BTEC Higher National in Computing.

It contains selections from market leading textbooks that are used on Higher Education programmes worldwide, and is specifically designed to cover the learning outcomes of each unit.

To download for FREE:

Step 1: Access free VitalSource account

Step 2: Read the textbook via your bookshelf in VitalSource

Step 3: Download the VitalSource app onto your favourite device and access the textbook offline.

To purchase a hard copy:

Please visit Pearson Bookstore ⧉ or contact +44 (0) 845 313 6666 (UK number) to place an order.

Core Computing Textbook

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Core Textbook
Deirdre Nugent

HIGHER NATIONALS IN
COMPUTING CORE TEXTBOOK

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HIGHER NATIONALS IN

COMPUTING

CORE TEXTBOOK

Level 4 HNC | Level 5 HND

Cover

We've updated our read aloud feature!
Give it a try here.

Pearson

HN GLOBAL

All Subjects   Short Courses   Learning Zone ❤   Tutor Resources ❤   QA Hub   Blog

❓ tutor | 👤 iram.bashir_56562 | Log out

Computing Reading List

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Unit 1: Programming

Textbooks

AHO, A. V. et al. (1987) Data Structures and Algorithms. 1st Ed. Addison-Wesley. HUNT, A. et al. (2000)

The Pragmatic Programmer: From Journeyman to Master. 1st Ed. Addison-Wesley. MCCONNELL, S. (2004)

Code Complete: A Practical Handbook of Software Construction. 2nd Ed. Microsoft Press.

Head First Object-Oriented Analysis and Design: A Brain Friendly Guide to OOA&D. 1st Ed. O'Reilly Media Inc. McLaughlin et al. (2006)

Unit 2: Networking

Textbooks

BURGESS, M. (2003) Principles of Network and System Administration. 2nd Ed. John Wiley and Sons Ltd.

HALLBERG, B. (2005) Networking: A Beginner's Guide. 4th Ed. Osborne/McGraw-Hill US.

LIMONCELLI, T. and HOGAN, C. (2001) The Practice of System and Network Administration. Addison-Wesley.

LOWE, D. (2005) Networking All-in-One Desk Reference for Dummies. 2nd Ed. Hungry Minds Inc.

OLIFER, N. and OLIFER, V. (2005) Computer Networks: Principles, Technologies and Protocols for Network Design. John Wiley and Sons Ltd.

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Useful websites and online platforms to support the delivery of your Higher National programme

Useful websites for Distance Learning

- http://edx.org
- https://online-learning.harvard.edu/
- https://www.my-mooc.com/en/
- https://www.open.edu/openlearn/
- https://www.udacity.com/
- https://www.codecademy.com/

- Others...

Useful to Understand Online Learning and Delivery

- https://www.futurelearn.com/courses/preparing-to-learn-online-at-university
- https://www.open.edu/openlearn/education-development/learning/how-can-you-take-your-teaching-online

Useful Research & Development Websites

- https://academic.oup.com/journals/pages/open_access

- https://doaj.org/

- https://www.omicsonline.org/open-access-journals-list.php

- https://www.onlineschools.org/open-access-journals/

- www.thinkwatson.com

- www.bcs.org

- www.fast.org.uk

- www.ico.gov.uk

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Alternative Software to Support Working from Home

- Packet Tracer - Free course and download - Network Simulation
- Brianlinkletter - Open Source Network Simulators Selection
- Linux - Open Source Operating System
- Unreal - games engine (free for education use)
- Unity - games engine (free for individual use)
- www.nltk.org - Natural Language Development Toolkit
- https://www.orocos.org - Open Robot Control Software
- https://nrelabs.io - Online Network (Engineering) Automation Tool

- LibreOffice and OpenOffice– free Microsoft Office compatible word processing, spreadsheet, etc.
- Blender – 3D modelling, rendering and animation system, video editing software
- Sketchup - 3D modelling software (free online modeller)

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Tips for delivering online

Pearson has collated research on effective online teaching. There are nine strategies used by successful educators:

1. Know the technology

2. Create and maintain a strong presence

3. Set clear expectations for the online session

4. Establish a sense of comfort and develop a community of students

5. Promote reflection and communication through quality asynchronous discussion

6. Have a good balance of active leader and active observer

7. Request regular feedback from students and be make sure you are clear (avoid misinterpretation)

8. Regularly check content resources and applications

9. Expect the unexpected and remain flexible

More information? Check out https://www.pearsoned.com/9-strategies-for-effective-online-teaching/

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Sharing Resources and Strategies that Work

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What have you found?

Ofqual Consultation

[Ofqual has announced its consultation](#) on how Vocational & Technical qualifications will be graded and awarded.

The consultation covers many of Pearson's qualifications, which are delivered in the UK and internationally, including the **BTEC Higher Nationals**.

The Ofqual consultation was open for comments until 8 May. We hope that all centres were able to contribute to the consultation.

Our priority remains to help learners progress to the next stage in their lives, and we will endeavour to award to as many learners as possible within best practice from Ofqual guidelines, as well as taking account of local regulations. Please see our updated FAQs for vocational and technical qualifications [here](#) for further details.

We want to make sure that we are doing everything we can to best support you and your learners at this time. Our website is updated daily with the latest news, advice and guidance and our free online resource offers to enable learning to continue for the rest of the academic year. If you have any further questions, please contact your Pearson representative.

Covid-19: Assessing and Awarding Higher Nationals in Computing

Important Note: All updates and guidance below are current as of the May 2020 of this Event and are subject to change. Please check our website regularly for further updates.

Latest HN Teaching & Assessment Guidance

Pearson Higher Education Qualifications have produced a detailed guidance document to support you in maintaining your provision in the new environment and on progressing students into study in 2021. You can find this:

COVID-19 Teaching and Assessment Guidance for BTEC Higher Nationals

We continue to work with Ofqual to establish how centres should deal with the certification of students in summer 2020 where they are unable to complete student teaching and assessment this year and we will communicate with you as soon as we have more detail to share.

We know you'll have many questions and we are here to support you. You can contact us via Pearson Support.

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COVID-19
HN Teaching & Assessment Guidance

The guidance document includes useful tips and resources to support alternative approaches to assessment and delivery:

- ✓ How to approach course design
- ✓ How to approach selection of an alternative BTEC Higher National Unit
- ✓ How to approach research
- ✓ How to approach groupwork
- ✓ How to approach the use of alternative software
- ✓ How to approach laboratory work
- ✓ How to approach work experience
- ✓ How to approach presentations
- ✓ Sector-specific guidance

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Covid-19: Sector-related updates/Guidance

Adapting Assessment

What does it mean?

1. It ***DOES NOT*** mean changing learning outcomes or assessment criteria.

2. Where students may show evidence of achievement by undertaking a ***different form of work/output*** – you may adapt the assignment and the form of assessment.

An example:

Originally - the assignment was to have students give a presentation, answer questions and then submit their reflections

Adapted – the students will present via Zoom (to the tutor and peers), then their peers will ask question in our VLE Forum and the student will give responses. They will post their reflections in their Personal Blog (on the VLE).

Specialist Equipment

First, ask yourself:

1. Do the learning outcomes or assessment criteria require the student to use specialist equipment? If not, can we adapt the assessment?

2. If the unit DOES require the use of specialist software:

    a. Do all of the student have access to a computer at home?
    b. Can students get access to the software and install it at home?

3. Are there alternative software packages that could be used?

An example:

Unit 2: Networking LO4 requires an implementation and diagnosis of a network. Whilst physically setting up a network would be preferred the use of a simulation tool such as Packet Tracer would be acceptable at this level (4)

There is nothing in the unit that would preclude this. However, we might need to allow students additional time to make this change in their process.

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Q&A

Additional Training

In addition to course materials and support services, we also regularly run training events to help you successfully deliver your course.

Whether you're new to Higher Nationals, need a refresher or want to know more about the Higher Nationals RQF qualifications, we've a range of events to help.

> Find out more about training

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Final Question:

How else might Pearson support your delivery?

highernationals@pearson.com

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ALWAYS LEARNING