University of Huddersfield

# Programme Specification

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| --- | --- | --- |
| 1 | Awarding institution: | University of Huddersfield |
| 2 | Teaching institution: | University of Huddersfield |
| 3 | School and Department | School of Computing and Engineering,  Department of Computer Science |
| 4 | Course Accredited by: | The Institution of Engineering and Technology (IET) |
| 5 | Mode of Delivery: | FT and SW |
| 6 | Final Award | BSc (Hons) |
| 7 | Course title | BSc (Hons) Music Technology and Audio Systems |
| 8 | UCAS code | H6W3 BSc/MTAS |
| 9 | Subject benchmark statement | Engineering (2019) |
| 10 | Date of Programme Specification | April 2010, October 2010, July 2011, July 2013,  September 2014, September 2017, June 2018,  August 2018, January 2022, February 2022 |

###### 11 Educational aims of the Course

Designed to develop knowledge and skills in music technology and music production, the course supports a range of career opportunities in the sound production industries. It is aimed at people with skills or a real interest in music technology and production who do not necessarily have a music qualification. The Department of Engineering and Technology offers the course in collaboration with the Department of Music and Drama. The course addresses music technology and production in the context of the music studio and the use of computers for music and sound production. Students have access to studio facilities for live recording and post-production work to allow skills development and for project work. Students also have access to music-workstation suites, where they develop skills with the hardware and software used for the creation of computer-generated music and sound. Audio technology studies include the principles of analogue and digital audio, audio processing, loudspeakers, microphones, acoustics and psychoacoustics.

The **BSc (Hons) Music Technology and Audio Systems** (MTAS) course provides a broad coverage of the area of Music Technology; it not only covers creative subjects but also the technical details behind how the equipment works. Programming is taught in several forms to provide the necessary technical underpinning of the course and to give an enhanced skills base for employment. Course options are available in Interactive Sound Design 1 and 2, Desktop Music Production 2, Live Event Audio Visual Systems, Sound For Film and Video and Interfaces for Music Expression and Production which further support career opportunities in these application areas. An optional work experience year allows students to work in the industry for a year, which considerably enhances students’ employability at the end of the course.

The course aims to produce graduates educated to BSc(Hons) level in accordance with the QAA framework and subject benchmark statement for Engineering.

###### 12 Intended learning outcomes

Appendix A shows which modules are on each course within the course. The mapping of modules to course outcomes is shown in appendix B.

The primary aim of this course is to prepare graduates for employment in a range of occupations in the music industry. These include working in recording studios, live sound,audio/music technology equipment R&D and studio design. The Engineering Council’s United Kingdom Standard for Professional Engineering Competence (UK-SPEC), which has also been adopted as the Engineering Benchmark Statement, specifies the engineering-generic learning outcomes expected for engineering courses leading to CEng/IEng status. Consequently, it is sensible to adopt these UK-SPEC outcomes directly, with limited re-phrasing to provide subject emphasis; to specify the learning outcomes expected of the course. The matrix showing how the modules of each course satisfy the learning outcomes, Appendix A, will then act to show how the course satisfies the requirements of the Engineering Council and HEFCE.

The presentation of learning in University of Huddersfield programme specification documents is required to conform to the University’s standard. So the outcomes have been ordered accordingly, with the corresponding UK-SPEC outcome shown in the final column. Also, some UK-SPEC outcomes have more than one operative verb, and so have been split: this is indicated by a letter following the UK-SPEC code.

The phrase ‘music technology and audio systems’ is used within a number of outcomes. It is intended to signify that these outcomes relate to the engineering disciplines covered within the course.

##### Knowledge and Understanding Outcomes

|  |  |
| --- | --- |
| 1) | Knowledge and understanding of the scientific principles underpinning music technology and audio systems, and their evolution |
| 2) | Knowledge and understanding of mathematics and an awareness of statistical methods necessary to support application of key engineering principles in music technology and audio systems |
| 3) | Knowledge and understanding of the systems level application of relevant technologies in music technology and audio systems |
| 4) | Knowledge and understanding to define a problem and identify constraints |
| 5) | Knowledge and understanding to design solutions according to customer and user needs |
| 6) | Knowledge and understanding to work with information that may be incomplete or uncertain in a practical context |
| 7) | Knowledge and understanding to ensure fitness for purpose (including operation, maintenance, reliability etc) |
| 8) | Knowledge and understanding to adapt designs to meet their new purposes or applications including cost drivers and evaluate outcomes. |
| 9) | Knowledge and understanding of commercial and economic context of music technology and audio systems processes |
| 10) | Knowledge of management techniques which may be used to achieve engineering objectives within music technology and audio systems |
| 11) | Understanding of the requirement for music technology and audio systems activities to promote sustainable development |
| 12) | Awareness of the framework of relevant legal requirements governing music technology and audio systems activities, including personnel, health, safety, and risk (including environmental risk) issues |
| 13) | Understanding of the need for a high level of professional and ethical conduct in the music technology and audio systems industries |
| 14) | Understanding of relevant materials, equipment, tools, processes, or products in music technology |
| 15) | Knowledge and understanding of recording studio, music industry and electronic laboratory practice. |
| 16) | Knowledge of contexts in which music technology and audio systems knowledge can be applied (e.g. operations and management, application and development of technology etc) |
| 17) | Awareness of quality issues and their application to continuous improvement relevant to music technology and audio systems |

##### Ability Outcomes

|  |  |
| --- | --- |
| 18) | Ability to monitor, interpret and apply the results of analysis and modelling in order to bring about continuous improvement |
| 19) | Ability to apply quantitative methods and computer software relevant to the multidisciplinary subject of music technology and audio systems |
| 20) | Ability to use the results of analysis to solve music technology and audio systems problems, apply technology and implement music technology and audio systems processes |
| 21) | Ability to apply a systems approach to music technology and audio systems problems |
| 22) | Ability to define a problem and identify constraints |
| 23) | Ability to design solutions according to customer and user needs |
| 24) | Ability to design solutions in presence of incomplete and uncertain information |
| 25) | Ability to ensure fitness for purpose (including operation, maintenance, reliability etc) |
| 26) | Ability to manage design including, considering cost drivers and evaluating outcomes |
| 27) | Ability to use relevant materials, equipment, tools, processes, or products in music technology |
| 28) | Ability to use and apply information from technical literature relevant to music technology and audio systems |
| 29) | Ability to use appropriate codes of practice and industry standards relevant to music technology and audio systems |
| 30) | Ability to communicate effectively in both written and oral form to technical and non-technical audiences |
| 31) | Ability to work effectively in a team environment |

##### 13 Course structure and requirements, levels, modules, credits and awards:

# Course Level and Awards

**BSc (Hons) (full-time)** will be awarded upon successful completion of modules which give the student 360 academic credits at foundation and post-foundation level. An unclassified award may be awarded to students successfully completing 300 academic credits, with at least 60 at Honours level.

**BSc (Hons) (sandwich)** will be awarded when the placement module has also been successfully completed (giving the student 120 extra S-level credits).

Intermediate awards are available as per University Regulations (with the titles Certificate of Higher Education in Music Technology and Audio Systems, Diploma of Higher Education in Music Technology and Audio Systems and BSc Music Technology and Audio Systems).

**Course Structure**

The BSc(Hons) Music Technology and Audio Systems course is a broad course encompassing modules ranging from the artistic to the technical. It not only covers the use of technology in recording, live sound and sound design but also includes modules that cover how the underlying technology works.

The structure of the course is shown in a diagram in Appendix C and is perhaps best explained by tracing themes or strands of modules through from Year 1 to Year 4.

The first strand of modules begins in Year 1 with **Studio Engineering and Mixing Essentials**. This module

covers the basics of studio engineering, production and mixing. **Desktop Music Production 1** in Year 1 focuses on the skills required to produce music solely with a computer environment, this can be explored further as an option in Year 2 with **Desktop Music Production 2** In Year 2, **Studio Production and Spatial Recording Techniques** incorporates spatial and concert hall recording, audio post production and editing.. Additionally the second year module looks at a range of producers from popular music history and studies their techniques and recordings. In Year 4, **Advanced Music Production and Mastering** allows students to further develop their production skills in the recording studio context.

The second strand of modules covers research and business and begins in Year 1 with **Professional Skills and Research Awareness** where the studies are focused on fundamental research methodologies, report writing and the state of the art in Music and Audio Technology. In the second year, these skills are utilised and built upon in the **Group Project** module in the production of a music technology related artefact. A major module in Year 4 is the **Individual Project (Music Technology)** module. Students pursue a project of their choice under the guidance of an academic supervisor. These projects may be based upon any strand or combination of strands of the course.

**Audio Technology** covers the underlying theory and technology behind music technology and audio systems. Fundamental audio theory and introductory audio electronics are covered. **Audio Electronics** inYear 2, expands the principles covered in **Audio Technology**. **Acoustics and Psychoacoustics** will also expand upon principles covered in **Audio Technology**, introducing the cohort to further and more advanced acoustical principles.

A further strand covers software development. Software is an important topic since knowledge and skills in software development give the student an appreciation of how the Music Technology tools they use are written. It also allows the student to develop new audio and MIDI manipulation tools. In Year 1 **Web Audio** covers introductory programming through the use of HTML and JavaScript and explores the Web Audio API. This is followed up in the Year 2 **Programming C and Microcontrollers** module by learning to program in the high level C language and develop software for microcontrollers. Students also study **Designing Audio Plugins – Effects and Synthesisers** in Year 4. This module teaches students how to develop audio plug-ins using in C++ with the JUCE toolkit.

The **Live Music Production** module in Year 1 provides a comprehensive coverage of live PA work from equipment specification and rigging to the specialist area of live sound mixing. This strand may be continued as an option in Year 2 with **Live Event Audio Visual Systems** which explores more advanced concepts which include networked audio, lighting systems and line array management.

A further optional module in year 2**, Game Audio,** would allow those students who are interested in the technicalities of AR/VR and audio creation for game systems to be explored.

**Digital Audio Systems and Processing** in Year 4 covers digital electronics in the context of audio system design and development. In addition, audio theory and algorithm development are covered to facilitate the development of systems to manipulate digital audio.

In Year 4, there is the option to study **Interfaces for music expression and production** This module focuses on the development and evaluation of New Interfaces for Musical Expression (NIME). This is achieved by a presenting and critiquing a range of existing commercially available interface paradigms, input devices and academic literature and then designing and evaluating a new interface.

**Sound for Film and Video**, an optional module in Year 4, will introduce concepts, theory and practical skills associated with Film and TV sound. The focus will be on sound design, Foley, sound effects, dialogue recording and editing, track lay, and mixing in stereo and surround.

Further optional modules are available in **Making Interactive Tools for Music and Audio, Advanced Interactive Tool Design for Music and Audio**.

The **Industrial Placement** module in Year 3 is optional but recommended. The course team believe that undertaking a placement year enhances the students employment prospects at the end of the course. It can also be a source of a project idea for the final year project and often increases student maturity and application in Year 4.

###### 14 Teaching, learning and assessment

Modules are mainly taught by staff from the Department of Engineering and Technology. One core and three optional modules are provided by staff from the Department of Music.

The majority of the modules are 20 credit modules (the exception being one 40 credit module) and these modules equate to 200 hours of study.

Teaching and learning enables the students to acquire the knowledge, understanding and skills required by the course. Music Technology and Production is by its nature a multi-disciplinary course and its broad range of content dictates that a variety of teaching and learning strategies be adopted. The use of a range of strategies also accommodates the different learning styles of different students.

These teaching and learning strategies include: formal and informal lectures, demonstrations of tools and techniques, small group workshops, practical sessions, individual tutorials, seminars and directed student centred learning. In addition, practitioners from industry (in some instances alumni) are invited to present to the students in the form of both formal lecture and demonstration of latest practice within industry. This includes tools and techniques that are directly applicable to the course content.

Students are encouraged to network amongst themselves, forming relationships that enable them to work in real world scenarios, whether completing a recording or design project. Students are able to undertake an enterprise placement year (EPY) as an alternative to the standard industry placement year. The EPY is supported by both academic staff and business advisors. Students taking this path are supported in running their own course related business for their sandwich year.

Course and curriculum design are influenced by academic contact with industry on placement visits and reviewed and approved by the Industrial Liaison Panel.

PDP is explicitly covered in the following modules: Professional Skills and Research Awareness , Group Project and Individual Project (Music Technology). All modules include an implicit element of PDP as most teaching and assessments develop skills that are used within industry. Appendix E contains detailed information pertaining to PDP throughout the course.

Formative assessment is an important part of the learning process and is provided in a variety of ways. On this course it includes verbal feedback on work reviewed in a practical or workshop sessions, computer marked formative tests, lecturer marked submitted written work and lecturer comment in seminars.

Assessment is used to determine if students have achieved the learning outcomes of each module and thus the learning outcomes of the course as a whole. Just as the nature of the course dictates a range of teaching learning strategies it also dictates a range of assessment strategies.

These assessment strategies include: unseen closed book tests, computer-based tests, in-class open book tests, individual and group assessments, written and audio submissions, presentations, interviews and both creative and technical exercises and assignments.

###### 15 Support for students and their learning

**University Level**

A range of central facilities are provided to support students:

* Student Services, which provides specialist advice in the areas of counselling, disability, pastoral care accommodation, finance and careers; it also supports a job shop for part-time work.
* Computing and Library Services provides induction and ongoing support for students.
* The International Office, which provides help and support for overseas students.

**Course Level**

* All students undertake an induction course at year 1.
* All students have a Personal Academic Tutor, with whom they can discuss academic performance. The Personal Academic Tutor will refer tutees to central help facilities as appropriate.
* Year Tutors are aldo available to provide guidance on academic issues.
* Module tutors are available to help with academic problems both inside and outside timetabled hours.
* An Academic Skills Tutor is available at school level to provide assistance with study and other skills and will ensure that students with special educational needs or disabilities are accommodated
* A central computer-based attendance monitoring scheme is operated and students with poor attendance are contacted and advised.
* Supporting documentation is provided, either online or printed in the form of student handbooks, module handbooks, course specifications and module specifications.
* All modules and year groups are supported on the virtual-learning environment (VLE)

**Personal Development Planning (PDP)**

* PDP will be incorporated into the Professional Skills and Research Awareness module in Year 1, Group Project module in Year 2 and Individual Project module in Final Year.
* Additionally, the Placement Unit provide a number of sessions in Year 2 to prepare students for placement including CV writing and mock interviews.
* Appendix E features detailed information regarding PDP throughout the course.

###### 16 Criteria for admission

Entry requirements are as per the University website - <http://www.hud.ac.uk/courses/>. The University’s normal entry criteria apply to all international students. International students will additionally need to meet the University’s standard English language requirements.

##### 17 Methods for evaluating and improving the quality and standards of teaching and learning

**Quality and Standards**

* The University’s Teaching and Learning Committee has ultimate responsibility for quality and standards of teaching and learning in the University.
* The School Board, via the School Teaching and Learning Committee has responsibility for implementing university policy through school-defined procedures.
* Subject review and revalidation take and focus inter alia on the arrangements for quality management and enhancement, teaching, learning and assessment, C&IT strategies, the articulation and assurances of standards, external examiner reports and evaluation and links with professional bodies, employers and other external organisations.

**Monitoring, Development and Evaluation**

* The Course Committee is responsible for the monitoring and development of the course, taking account of feedback from staff, students and external examiners. Feedback is sought as follows:
* from students through annual course and module evaluation questionnaires, termly Student Panel meetings and input from student members of the Course Committee;
* from external examiners through annual reports, course assessment board minutes, assessment moderation reports and informal verbal communication during the year.
* The annual evaluation of the course is the responsibility of the School Board. The Course Committee prepares an annual evaluation report comprising reporting and evaluation, informed by feedback from staff, students and external examiners and by statistical data.

**Validation of Courses, Modules and Changes**

* Course validation takes place under the University's [Quality Assurance Procedures for Taught Programmes](http://www.hud.ac.uk/registry/regulationsandpolicies/qa/).
* Amendments to course and module documents are validated by the School Accreditation and Validation Panel.

**Teaching and Learning**

* The School Teaching and Learning Panel, a sub-committee of the School Teaching and Learning Committee, is tasked with implementing the University's teaching and learning strategy and with fostering innovation in teaching and learning and the dissemination of good practice.
* A process for the peer observation of teaching is in place with the object of enhancing teaching practice and sharing ideas between staff.

###### 18 Regulation of assessment

Assessment regulations are as detailed in the University of Huddersfield [Regulations for Awards](http://www.hud.ac.uk/registry/regulationsandpolicies/awards/), relevant sections of which are repeated in the [Students' Handbook of Regulations](http://www.hud.ac.uk/registry/regulationsandpolicies/studentregs/).

Details of the assessment schedule and outcomes assessed for each module are provided in the module specification documents.

The Industrial Placement in Year 3 is optional but it is recommended. The Industrial placement module is a pass/fail module.

**Course Specific Regulations**

The following course regulation, which is a requirement of Professional body accreditation, will be applicable for student entry from academic year 2022-2023.

* A maximum of 20 credits in a Bachelor’s or Integrated Master’s degree can be condoned (termed Compensation by the Engineering Council).
  + If a module is available for Condonement, an opportunity will be given to undertake the appropriate referral assessment/s – if however the respective module is not subsequently assessed as an overall pass, then the condoned pass credits will be awarded, with no further module condonement available in subsequent levels of the course.

###### 19 Indicators of quality and standards

Course Validation

External Examiners’ Reports

National Student Survey

University Course Evaluation Survey

**Please note**: This specification provides a concise summary of the main features of the Course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each module can be found in the study module guide and course handbook. The accuracy of the information contained in this document is reviewed by the University and may be checked by the Quality Assurance Agency for Higher Education.

**Key sources of information about the course can be found in:**

[www.hud.ac.uk](http://www.hud.ac.uk) - University website

http://compeng.hud.ac.uk/internal-student/ - the School of Computing and Engineering intranet contains Year Handbooks and Module Specifications.

**APPENDIX A: MAPPING OF MODULES TO COURSE**

|  |  |  |
| --- | --- | --- |
| CODE | MODULE |  |
|  | YEAR 1 |  |
|  |  |  |
| NFE2181 | Professional Skills and Research Awareness | · |
| NFE2183 | Studio Engineering and Mixing Essentials | · |
| NFE2172 | Audio Technology | · |
| AFM1214 | Desktop Music Production 1 | · |
| NFE2180 | Live Music Production | · |
| NFE2184 | Web Audio | · |
|  |  |  |
|  |  |  |
|  | YEAR 2 |  |
|  |  |  |
| NIE2249 | Acoustics and Psychoacoustics | · |
| NIE2256 | Studio Production and Spatial Recording Techniques | · |
| NIE2255 | Programming in C and Microcontrollers | · |
| NIE2273 | Audio Electronics | · |
| NIE2252 | Group Project | · |
| AIM2219  AIM2214 | Making Interactive Tools for Music and Audio  Desktop Music Production 2 | o  o |
| NIE2253  NIE2251 | Live Event - Audio Visual Systems  Game Audio | O  o |
|  | **YEAR 3 (OPTIONAL)** |  |
|  |  |  |
| NSZ2303 | Industrial Placement | o |
|  |  |  |
|  | YEAR 4 |  |
|  |  |  |
| NHE2440 | Individual Project (Music Technology) | · |
| NHE2455 | Designing Audio Plugins – Effects and Synthesisers | · |
| NHE2456 | Digital Audio Systems and Processing | · |
| NHE2453 | Advanced Music Production and Mastering | · |
| NHE2459 | Sound for Film and Video | o |
| NHE2457  AHM3218 | Interfaces for music expression and production  Advanced Interactive Tool Design for Music and Audio | o  o |
|  |  |  |

· - represents a Core module on that course

O - represents an Optional module on that course

There are no Compulsory modules

Alternative optional modules may exceptionally be taken with the agreement of the Course Leader.

APPENDIX B: MAPPING OF MODULES TO COURSE OUTCOMES

BSc (Hons) Music Technology and Audio Systems



APPENDIX C: COURSE STRUCTURE

BSc (Hons) Music Technology and Audio Systems

|  |  |  |  |
| --- | --- | --- | --- |
| **YEAR 1** | **YEAR 2** | **YEAR 3** | **YEAR 4** |
| NFE2181 20  Professional Skills and Research Awareness | NIE2252 20  Group Project | NSZ2303 120  Industrial Placement  (Optional) | NHE2440 40  Individual Project (Music Technology) |
| NFE2183 20  Studio Engineering and Mixing Essentials | NIE2256 20  Studio Production and Spatial Recording Techniques |
| NFE2172 20  Audio Technology | NIE2249 20  Acoustics and Psychoacoustics | NHE2455 20  Designing Audio Plugins – Effects and Synthesis |
| NFE2184 20  Web Audio | NIE2255 20  Programming C and Microcontrollers | NHE2456 20  Digital Audio Systems and Processing |
| NFE2180 20  Live Music Production | NIE2273 20  Audio Electronics | NHE2453 20  Advanced Music Production and Mastering |
| AFM1214 20  Desktop Music Production 1 | OPTIONS 1 x 20  NIE2253 Live Event Audio Visual Systems  OR  AIM2219  Making Interactive Tools for Music and Audio  OR  AIM2214 Desktop Music Production 2 | OPTIONS 1 x 20  NHE2459 Sound for Film and Video  OR  NHE2457 Interfaces for music expression and production  OR  AHM3218  Advanced Interactive Tool Design for Music and Audio |
| *Certificate of Higher Education ---------->* |  | | |
| *Diploma of Higher Education --------------------------------------------------------------------->* | |  | |
| *Ordinary Degree (300 credits) ----------------------------------------------------------------------------------------------------------------------------------------------------------->* | | | |

Alternative optional modules may exceptionally be taken with the agreement of the Course Leader

APPENDIX D: OUTLINE ASSESSMENT SCHEDULE

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Module** | **Assessment** | **Oct/Nov/Dec** | **Jan/Feb** | **Mar/April** | **Exam Period** |
| **Year 1** |  |  |  |  |  |
| NFE2181 Professional Skills and Research Awareness | Individual report and group assessment | Assignment 1 |  | Assignment 2 |  |
| NFE2183  Studio Engineering and Mixing Essentials | Group Recording  Practical Test  Group Mix  In Class Test | Practical Test | Group Recording | Group Mix  In Class Test |  |
| NFE2172 Audio Technology | In class test x2  Assignment |  | In-Class Test | Assignment  In class test 2 |  |
| NFE2184 Web Audio | Individual Assignment 1 & 2 | Assignment 1 |  | Assignment 2 |  |
| AFM1214 Desktop Music Production 1 | Portfolio of Structured Exercises  Creative Production Work | Portfolio of Structured Exercises |  | Creative Production Work |  |
| NIE2180 Live Music Production | Individual and Group Assessments |  | Assignment 1 |  | Assignment 2  In-Class Test |
| **Year 2** |  |  |  |  |  |
| NIE2252 Group Project | Group Report and Development Portfolio assessment | Assignment 1 |  | Assignment 2 |  |
| NIE2256  Studio Production and Spatial Recording Techniques | Studio Production with report and Concert Hall recordings with report | Assignment 1 |  | Assignment 2 |  |
| NIE2255 Programming in C and Microcontrollers | Individual In-Class Test and assignment and microcontroller assignment | In Class Test | Assignment 1 | Assignment 2 |  |
| NIE2249 Acoustics and Psychoacoustics | Individual In-Class Test and Matlab programming excercises | In Class Test |  | Assignment 2 |  |
| NIE2253 Live Event Audio Visual Systems (option) | Individual and Group Assessments | Assignment 1 |  | Assignment 2 |  |
| NIE2273 Audio Electronics | Individual and Group Assessments | Assignment 1 |  | Assignment 2 |  |
| AIM2219  Making Interactive Tools for Music and Audio  (option) | Individual Assessment | Assignment 1 |  | Assignment 2 |  |
| AIM2214 Desktop Music Production 2 (option) | Production Task x2 | Production Task 1 |  | Production Task 2 |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Module** | **Assessment** | **Oct/Nov/Dec** | **Jan/Feb** | **Mar/April** | **Exam Period** |
| **Final Year** |  |  |  |  |  |
| NHE2440 Individual Project (Music Technology) | Individual Assessments | Report 1 – Assignment |  |  | Report 2 & Artefact - Assignment |
| NHE2455 Designing Audio Plugins - Effects and Synthesisers | In-class Test & Practical Assessments | In-Class Test 1 |  | In-Class Test 2 | Practical Assessment |
| NHE2456 Digital Audio Systems and Processing | In-Class Test and Practical Assessments | In-Class Test |  | Assignment 2 | In-Class Test and Practical Assessments |
| NHE2453 Advanced Music Production and Mastering (option) | Group Mix, Group Mastering and Individual In-Class Test | Assignment 1 & Practical Test |  | Assignment 2 and In-class test |  |
| AHM3218  Advanced Interactive Tool Design for Music and Audio  (option) | Individual Assessment | Assignment 1 |  | Assignment 2 |  |
| NHE2459 Sound for Film and Video (option) | Individual Assessments | Assignment 1 |  | Assignment 2 |  |
| NHE2457 Interfaces for music expression and production | Report  Group Assignment |  | Report | Group Assignment |  |

**Appendix E- AHEP 4 Mapping to Course Outcomes**

| **Subject Benchmark Statements (AHEP-4)** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| B1 | **** | **** | **** | **** | **** |  | **** |  |  |  |  |  |  |
| **B2** | **** | **** | **** | **** | **** | **** | **** | **** |  |  |  | **** |  |
| **B3** | **** | **** | **** |  |  | **** |  |  |  |  |  |  |  |
| **B4** | **** | **** | **** | **** | **** | **** |  | **** |  |  |  |  |  |
| **B5** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** |
| **B6** |  |  | **** |  |  |  |  |  |  |  |  |  |  |
| **B7** |  |  |  |  |  |  | **** | **** |  |  | **** | **** | **** |
| **B8** |  |  |  |  |  |  |  |  |  |  |  | **** | **** |
| **B9** |  |  |  |  |  |  |  |  |  |  |  | **** | **** |
| **B10** |  |  |  |  |  |  |  |  |  |  |  | **** | **** |
| **B11** |  |  |  |  |  |  |  |  |  |  | **** |  | **** |
| **B12** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **B13** |  |  |  |  |  |  |  | **** |  |  | **** |  |  |
| **B14** |  |  |  |  | **** | **** | **** | **** | **** | **** | **** | **** |  |
| **B15** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **B16** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **B17** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **B18** |  |  |  | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** |

| **Subject Benchmark Statements (AHEP-4)** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** | **25** | **26** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| B1 |  |  |  |  |  | **** | **** | **** | **** | **** |  | **** | **** |
| **B2** | **** |  | **** |  | **** | **** | **** | **** | **** | **** | **** | **** | **** |
| **B3** |  |  |  |  | **** | **** | **** | **** | **** |  |  |  |  |
| **B4** |  |  |  |  |  |  |  |  | **** | **** | **** | **** |  |
| **B5** | **** |  | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** |
| **B6** |  |  |  |  |  |  |  | **** |  |  |  |  |  |
| **B7** |  |  |  |  |  |  |  |  |  | **** |  | **** | **** |
| **B8** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **B9** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **B10** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **B11** |  |  |  |  |  |  |  |  |  | **** |  |  |  |
| **B12** |  | **** |  |  |  |  |  |  |  |  |  |  |  |
| **B13** | **** |  | **** |  |  |  |  |  |  |  |  |  |  |
| **B14** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **B15** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **B16** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **B17** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **B18** |  |  |  | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** |

| **Subject Benchmark Statements (AHEP-4)** | **27** | **28** | **29** | **30** | **31** |
| --- | --- | --- | --- | --- | --- |
| B1 |  | **** |  |  |  |
| **B2** | **** | **** |  |  |  |
| **B3** |  |  |  |  |  |
| **B4** | **** | **** |  |  |  |
| **B5** | **** | **** | **** |  |  |
| **B6** |  |  |  |  |  |
| **B7** |  |  |  |  |  |
| **B8** |  |  |  |  |  |
| **B9** | **** | **** | **** | **** | **** |
| **B10** |  |  |  |  |  |
| **B11** |  |  |  |  | **** |
| **B12** |  |  |  |  |  |
| **B13** |  |  |  |  |  |
| **B14** |  |  |  |  |  |
| **B15** |  |  | **** |  |  |
| **B16** |  | **** | **** | **** | **** |
| **B17** |  | **** | **** | **** |  |
| **B18** |  |  |  |  |  |

|  |  |
| --- | --- |
| **AHEP4 Descriptors** | |
| B1. | Apply knowledge of mathematics, statistics, natural science and engineering principles to broadly-defined problems. Some of the knowledge will be informed by current developments in the subject of study |
| B2. | Analyse broadly-defined problems reaching substantiated conclusions using first principles of mathematics, statistics, natural science and engineering principles |
| B3. | Select and apply appropriate computational and analytical techniques to model broadly-defined problems, recognising the limitations of the techniques employed |
| B4. | Select and evaluate technical literature and other sources of information to address broadly-defined problems |
| B5. | Design solutions for broadly-defined problems that meet a combination of societal, user, business and customer needs as appropriate. This will involve consideration of applicable health & safety, diversity, inclusion, cultural, societal, environmental and commercial matters, codes of practice and industry standards |
| B6. | Apply an integrated or systems approach to the solution of broadly-defined problems |
| B7. | Evaluate the environmental and societal impact of solutions to broadly-defined problems |
| B8. | Identify and analyse ethical concerns and make reasoned ethical choices informed by professional codes of conduct |
| B9. | Use a risk management process to identify, evaluate and mitigate risks (the effects of uncertainty) associated with a particular project or activity |
| B10. | Adopt a holistic and proportionate approach to the mitigation of security risks |
| B11. | Recognise the responsibilities, benefits and importance of supporting equality, diversity and inclusion |
| B12. | Use practical laboratory and workshop skills to investigate broadly-defined problems |
| B13. | Select and apply appropriate materials, equipment, engineering technologies and processes |
| B14. | Recognise the need for quality management systems and continuous improvement in the context of broadly-defined problems |
| B15. | Apply knowledge of engineering management principles, commercial context, project management and relevant legal matters |
| B16. | Function effectively as an individual, and as a member or leader of a team |
| B17. | Communicate effectively with technical and non-technical audiences |
| B18. | Plan and record self-learning and development as the foundation for lifelong learning/CPD |

**Appendix F - PDP Mapping**

**PDP Mapping**

Demonstration of how personal development planning (PDP) maps onto modules and is progressed through the course, evidencing the strategy on PDP summarised in section 14 and available in the [University’s PDP Guidance document](https://www.hud.ac.uk/media/universityofhuddersfield/content/documents/registry/regulationsandpolicies/policiesandguidance/pdp_policy.pdf):

**Year 1**

|  |  |  |  |
| --- | --- | --- | --- |
| **Aspect of PDP** | **Modules/area PDP delivery** | **How is PDP achieved** | **Process** |
| **Personal Reflection** | NFE2181  Personal tutoring | Reflection on development and the industry  Sessions encourage analysis and reflection, and also work on breaking down feedback and extracting value in reflection | Assessment  PAT Process |
| **EVIDENCE** | NFE2181  Personal Tutoring | Assessment  PAT documentation | PAT process is documented and training provided to all staff |
| **Career Planning** | NFE2181  All modules  Personal Tutoring | Students are exposed to multiple research approaches as well as multiple career destinations. Employability services withn the school are involved  As part of the curriculum design industry content is embedded in all modules, providing students the opportunity to reflect on the impact of their modules on their career development  Continuous reflection and assessment of personal progress towards academic and career goals | Module Assessment  Lecture content, industry experts in the teaching team, career development incorporated into assessment  PAT process |
| **EVIDENCE** | NFE2181  All Modules  Personal Tutoring | Assessment  VLE, Lecture capture and assessment  PAT documentation |  |
| **Developing independence / confidence** | Group Presentation  Individual Assessment  Personal tutoring | Group presentation and work completion is used in NFE2183 and NFE2180  Individual assessments encourage use of feedback to develop individuals. This process is particularly strong in NFE2181  Students reflect on performance and analyse feedback through the personal tutoring process | Assessment  Assessment  PAT Process |
| **EVIDENCE** | Group Presentation  Individual Assessment | Assessment on NFE2183 and NFE2180  VLE assessment submissions |  |

**Year 2**

|  |  |  |  |
| --- | --- | --- | --- |
| **Aspect of PDP** | **Modules/area PDP delivery** | **How is PDP achieved** | **Process** |
| **Personal Reflection** | Personal Tutoring  Placement Support | Sessions encourage analysis and reflection, and also work on breaking down feedback and extracting value in reflection  Sessions provide context to application through reflection on current position | PAT Process  Placement Support Process |
| **EVIDENCE** | Personal Tutoring | Continuous reflection and assessment of personal | PAT Process |
| **Career Planning** | Placement Support  Personal Tutoring  Specialist Modules | Development of CV  Increased focus in development of specialism and personal development  Specialist modules provide career planning throughout, preparing students for particular roles and reflecting on transferability of knowledge and skills | Placement Support Process  PAT Process  Delivery and assessment |
| **EVIDENCE** | Placement Support  Specialist Modules | Submission of CV  Assessment and lecture capture | Placement Support Process |
| **Developing independence / confidence** | Personal Tutoring | Students reflect on performance and analyse feedback through the personal tutoring process | PAT Process |
| **EVIDENCE** | Personal Tutoring | Personal tutoring logs | PAT Process |

**Placement Year**

|  |  |  |  |
| --- | --- | --- | --- |
| **Aspect of PDP** | **Modules/area PDP delivery** | **How is PDP achieved** | **Process** |
| **Personal Reflection** | Placement Log | Log provides opportunity for personal reflection | Assesmsent submission – learning outcomes have a reflection focus |
| **EVIDENCE** | Placement log | Assessment submission |  |
| **Career Planning** | Placement Log  Placement Visits  Company Supervision | Log provides opportunity for personal planning  Allocated University tutor discusses career planning  Company supervisor discusses career planning | Assessment  Interview  Interview |
| **EVIDENCE** | Placement Log  Placement Visits  Company Supervision | Assessment  Visiting tutor forms  Visiting tutor discussion with supervisor documented in visitor forms |  |
| **Developing independence / confidence** | Workplace activity | On placement students will gain knowledge and skills, and then be given increasing independence in meeting goals set by the employer | Placement process |
| **EVIDENCE** |  |  |  |

**Final Year**

|  |  |  |  |
| --- | --- | --- | --- |
| **Aspect of PDP** | **Modules/area PDP delivery** | **How is PDP achieved** | **Process** |
| **Personal Reflection** | NHE2440/ Personal Tutoring  NHE2453 | Individual supervision provides reflection opportunities in both regular supervision and in assessment support  Reflective commentary in assessment | Project supervision  Students are provided guidance as to how to engage in self-reflection, goal setting and analysis |
| **EVIDENCE** | NHE2440  NHE2453 | Supervision logs  Assessment Submission |  |
| **Career Planning** | NHE2440  Specialist Modules  NHE2458 | Lecture provided by career service in school and targeted recruitment events  Specialist modules across the course focus on cutting edge career aspects and development of portfolios  Industry focussed feedback provided by external advisors | Lecture provided in the run up to the end of the first semester with events through the year  Curriculum has a career focus and assessment supports building of portfolio  Online feedback sessions with professionals at intervals through the academic delivery |
| **EVIDENCE** | NHE2440  Specialist Modules  NHE2458 | Lecture Capture  Lecture capture and assessment  Portfolio Development |  |
| **Developing independence / confidence** | NHE2440/ Personal Tutoring  All modules | Students reflect on performance and analyse feedback through the personal tutoring process as part of the project supervision  Final year assessment has a personal focus, with portfolio elements present in multiple modules. | Delivered through personal supervision  Assessment and delivery |
| **EVIDENCE** | NHE2440/ Personal Tutoring | Weekly supervision and tutoring logs |  |