Course Specification

Course Summary Information		
1	**Course Title**	BSc (Hons) Sound Engineering
2	**Course Code**	US1525 US1526
3	**Awarding Institution**	Birmingham City University
4	**Teaching Institution(s)** (if different from point 3)	
5	**Professional Statutory or Regulatory Body (PSRB) accreditation** (if applicable)	

6	**Course Description**
	Do you dream of engineering the future of sound? Our BSc (Hons) Sound Engineering course is designed to immerse you in the cutting-edge world of audio technology and production, equipping you with the skills to pursue careers in live sound, acoustics, audio hardware and software development, and studio production. Delivered across the Faculty of Computing, Engineering, and the Built Environment (CEBE) and the Royal Birmingham Conservatoire (RBC), this course blends technical expertise, creative flair, and hands-on experience to prepare you for a dynamic career in the world of sound engineering. The course offers a comprehensive curriculum to develop your skills across several audio disciplines and employment sectors. You will explore the principles of acoustics, live sound, broadcast audio, studio recording, immersive technologies and software development. Alongside practical experience, you will engage with advanced topics, embracing embedded audio systems, machine learning in audio, and multi-channel sound design—positioning you at the forefront of the emerging technologies shaping the audio industry. Our facilities are purpose-built for innovation and hands-on learning, from world-leading state-of-the-art recording studios at the Royal Birmingham Conservatoire to the immersive SoundLab® in STEAMhouse. You will use industry-standard tools such as Logic, Pro Tools, MATLAB, Python, and C++. You will study on state-of-the-art Solid State Logic (SSL) recording consoles, run live sound sessions with industry-standard PA, and utilise our vast array of microphones from Neumann, Brauner and AKG. Our industry-aligned modules have been designed and finessed through over 25 years of delivery within the field. You will gain invaluable experience and networking opportunities through our Industrial Mentors forum and annual Innovation Fest, connecting you with leading employers and excellent job prospects. Whether designing immersive soundscapes or audio systems, delivering live events, or mastering production techniques, this course equips you with the skills to excel in the evolving field of sound engineering. Join us to turn your passion for sound, music or science into a dynamic and fulfilling career in one of the most innovative and exciting industries today.

7	Course Awards		
7a	**Name of Final Award**	**Level**	**Credits Awarded**
	Bachelor of Science with Honours Sound Engineering Bachelor of Science with Honours Sound Engineering with Professional Placement Year	6 6	360 480
7b	**Exit Awards and Credits Awarded**		
	Certificate of Higher Education Sound Engineering Diploma of Higher Education Sound Engineering Bachelor of Science Sound Engineering	4 5 6	120 240 300

8	Variation from the University Regulations
	N/A

9	Delivery Patterns			
Mode(s) of Study		**Location(s) of Study**	**Duration of Study**	**Code(s)**
Full Time		City Centre	3 years	US1525
Professional Placement		City Centre	4 years	US1526

10	Entry Requirements
	The admission requirements for this course are stated on the course page of the BCU website at Courses | Birmingham City University or may be found by searching for the course entry profile located on the UCAS website.

11	Course Aims
	The aims of this course are to: • Provide students with a solid foundation in sound engineering principles, focusing on developing the essential skills required in the audio industries. • Cultivate advanced technical competencies in tools and technologies pivotal to sound engineering practice. • Encourage interdisciplinary collaboration, preparing students to work effectively in diverse teams, mirroring industry practices. • Foster innovation and problem-solving skills, equipping students to address and overcome challenges in sound engineering. • Align the curriculum with industry standards, ensuring students are well-prepared for career opportunities in the audio sector. • Develop project management and teamwork skills, essential for success in the collaborative environment of sound engineering. • Promote an understanding of professional and ethical standards in the audio industries, preparing students for responsible roles. • Encourage lifelong learning and adaptability, enabling students to keep pace with the rapidly evolving field of sound engineering.

	• Assist students in building a professional portfolio or practice that showcases their skills and projects, enhancing their employability and career prospects in the audio industries.

12	**Course Learning Outcomes**
	Knowledge and Understanding
1	Demonstrate knowledge of core concepts and principles of sound engineering, including acoustics, audio signal chain, digital audio and audio electronics.
2	Evaluate and apply appropriate software, hardware and programming tools to develop advanced audio applications and products.
3	Critically evaluate the suitability of acoustic measurement and design techniques for application in engineering projects.
4	Appraise and implement audio workflows in professional live, studio and broadcast environments.
5	Assess and apply the principles of sound engineering in the context of audio production and content development.
	Skills and Other Attributes
6	Critically evaluate and apply live, broadcast and recording techniques in the creation of functional and engaging live events and audio productions.
7	Utilise various sound engineering tools to develop, evaluate and consult on acoustic and audio product designs.
8	Develop effective problem-solving strategies and innovative solutions in sound engineering challenges.
9	Collaborate within multidisciplinary teams, effectively communicating technical concepts to non-technical members.
10	Implement project management and quality assurance processes to ensure the successful completion of audio projects.

13	**Level Learning Outcomes**
	Upon completion of Level 4 / the Certificate of Higher Education, students will be able to:
	Demonstrate foundational knowledge of fundamental audio concepts including acoustics, digital audio and audio electronics.
	Apply signal chain principles to the capture and reproduction of audio in studio and live environments.
	Evaluate and select appropriate software and programming tools to develop basic audio applications and analysis methods.
	Communicate the results of sound engineering projects accurately and reliably.
	Upon completion of Level 5 / the Diploma of Higher Education, students will be able to:
	Develop and prototype audio systems and software, integrating advanced implementation techniques.
	Demonstrate recording and production techniques in a range of environments for medium-sized recording and broadcast projects.
	Apply and evaluate industry-standard acoustic measurement and design techniques.
	Collaborate in multidisciplinary teams and effectively communicate technical information to non-specialist audiences.
	Upon completion of 60 credits at Level 6 / the Bachelors Degree, students will be able to:
	Design and implement complex audio processes, applying advanced sound engineering concepts.
	Critically evaluate and deploy immersive audio techniques and effectively communicate limitations.

	Implement and evaluate the performance of machine learning models for sound engineering applications.
	Analyse and apply advanced digital and networked audio workflows in professional live sound environments.
	Demonstrate effective team collaboration and decision-making in complex audio projects.

14	**Course Learning, Teaching and Assessment Strategy**

The learning, teaching, and assessment strategy for the Sound Engineering course is structured to provide a dynamic and immersive educational experience. The course utilises a blend of theoretical lectures, practical workshops, and real-world project-based learning to ensure students gain a deep understanding and hands-on experience. This strategy will be implemented by colleagues in both CEBE and RBC.

Learning and Teaching Approaches:

- Lectures: Deliver foundational knowledge and emerging trends in sound engineering.
- Workshops: Provide hands-on experience with industry-standard equipment and software.
- Seminars: Facilitate discussions on case studies and current industry practices.
- Group Projects: Promote collaboration and problem-solving skills, simulating real-world sound engineering scenarios.
- Guest Lectures: Offer insights from industry professionals, enhancing learning with real-world relevance, complimented by our industrial mentor's forum.

Assessment Strategy:

- Portfolios: Showcase a compilation of students' work, reflecting their technical skills and creativity.
- Practical Assessments: Evaluate the application of taught skills in real-world-like scenarios.
- Presentations: Develop communication skills, allowing students to articulate their processes and solutions.
- Scientific Reports: Demonstrate academic and technical writing techniques to report and discuss scientific experiments and results.
- Reflective Journals: Encourage students to reflect on their learning journey, fostering self-assessment and critical thinking.
- Peer Reviews: Enable students to give and receive feedback, promoting a deeper understanding of the subject matter.

Feedback and Feedforward:

- Continuous Feedback: formative feedback is provided throughout modules to guide students' learning and project development. Where appropriate, industry experts will provide formative feedback within modules.
- Feedforward: Offers constructive guidance on how to improve and apply skills in future work.
- One-on-One Tutorials: Allow for personalised feedback and targeted developmental advice.

	Expectations from Students: • Active participation in all learning activities. • Engagement with peer feedback and collaborative projects. • Self-directed exploration and research to complement structured learning. • Commitment to continuous improvement and receptiveness to feedback.

15	**Course Requirements**
15a	**Level 4:** ***In order to complete this course a student must successfully complete all the following CORE modules totalling 120 credits:***

Module Code	Module Name	Credit Value
DIG4154	Acoustic Fundamentals	20
DIG4157	Digital Audio Fundamentals	20
DIG4151	Sound Recording	20
DIG4155	Audio Electronics	20
CMP4311	Audio Programming	20
CMP4309	Live Sound Fundamentals	20

Level 5:

In order to complete this course a student must successfully complete all the following CORE modules totalling 120 credits:

Module Code	Module Name	Credit Value
DIG5117	Broadcast Sound	20
CMP5388	Digital Audio Effects	20
CMP5389	Embedded Audio Systems	20
DIG5124	Acoustic Applications	20
CMP5404	Audio Industries	20
DIG5113	Recording, Production and Delivery	20

Professional Placement Year (optional):

To qualify for the award of Bachelor of Science with Honours Sound Engineering with Professional Placement Year, a student must successfully complete the modules listed as well as the following Level 5 module:

Module Code	Module Name	Credit Value
PPY5004	Professional Placement	120

Level 6:

In order to complete this course a student must successfully complete all the following CORE modules totalling 100 credits):

Module Code	Module Name	Credit Value
CMP6248	Immersive Audio	20
CMP6249	Audio Machine Learning	20
CMP6250	Advanced Live Sound	20
CMP6200	Individual Honours Project	40

In order to complete this course a student must successfully complete at least 20 credits from the following indicative list of OPTIONAL modules.

Module Code	Module Name	Credit Value
CMP6251	Mastering	20
DIG6107	Game Audio	20

15b	Structure Diagram

Please note list of optional modules is indicative only. Students' choice will not be guaranteed for optional modules but a fair and transparent process will be adopted and shared with students.

Level 4

SEMESTER ONE	SEMESTER TWO
Core DIG4154: Acoustic Fundamentals (20 credits) DIG4157: Digital Audio Fundamentals (20 credits) DIG4151: Sound Recording (20 credits)	Core DIG4155: Audio Electronics (20 credits) CMP4311: Audio Programming (20 credits) CMP4309: Live Sound Fundamentals (20 credits)

Level 5

Core DIG5117: Broadcast Sound (20 credits) CMP5389: Embedded Audio Systems (20 credits) CMP5404: Audio Industries (20 credits)	Core DIG5124: Acoustic Applications (20 credits) CMP5388: Digital Audio Effects (20 credits) DIG5113: Recording, Production and Delivery (20 credits)

Professional Placement – Year 3 (optional)

PPY5004 Professional Placement Module (120 credits)

Level 6

Core CMP6248: Immersive Audio (20 credits) CMP6250: Advanced Live Sound (20 credits)	Core CMP6249: Audio Machine Learning (20 credits)
	Optional CMP66251: Mastering (20 credits) DIG6107: Game Audio (20 credits)
CMP6200: Individual Honours Project (40 credits)	

16 Overall Student Workload and Balance of Assessment

Overall student *workload* consists of class contact hours, independent learning and assessment activity, with each credit taken equating to a total study time of around 10 hours. While actual contact hours may depend on the optional modules selected, the following information gives an indication of how much time students will need to allocate to different activities at each level of the course.

- *Scheduled Learning* includes lectures, practical classes and workshops, contact time specified in timetable
- *Directed Learning* includes placements, work-based learning, external visits, on-line activity, Graduate+, peer learning
- *Private Study* includes preparation for exams

The *balance of assessment* by mode of assessment (e.g. coursework, exam and in-person) depends to some extent on the optional modules chosen by students. The approximate percentage of the course assessed by coursework, exam and in-person is shown below.

Level 4

Workload

24% time spent in timetabled teaching and learning activity

Activity	Number of Hours
Scheduled Learning	288
Directed Learning	392
Private Study	520
Total Hours	1200

Balance of Assessment

Assessment Mode	Percentage
Coursework	75%
Exam	0%
In-Person	25%

Level 5

Workload

24% time spent in timetabled teaching and learning activity

Activity	Number of Hours
Scheduled Learning	288
Directed Learning	344
Private Study	568
Total Hours	1200

Balance of Assessment

Assessment Mode	Percentage
Coursework	80%
Exam	0%
In-Person	20%

Level 6

Workload

17% time spent in timetabled teaching and learning activity

Activity	Number of Hours
Scheduled Learning	202
Directed Learning	292 or 268 (Mastering or Game Audio)
Private Study	706 or 730 (Mastering or Game Audio)
Total Hours	1200

Balance of Assessment

Assessment Mode	Percentage
Coursework	70% or 66% (Mastering or Game Audio)
Exam	0%
In-Person	30% or 34% (Mastering or Game Audio)