**Course Description:**

Students put music theory and basic music skill into practice as they engineer sound for live and recorded production. They create, capture, edit, mix and synchronize music into audio and video tracks of various formats. Topics include acoustics, reflection, absorption of sound and reverberation. Students create products based on research of audience sensitivity and need and do so in compliance with laws related to intellectual property and competition.

**Strand 1. Business Operations/21st Century Skills**

Learners apply principles of economics, business management, marketing and employability in an entrepreneur, manager and employee role to the leadership, planning, developing and analyzing of business enterprises related to the career field.

**Outcome 1.1. Employability Skills**

Develop career awareness and employability skills (e.g., face‐to‐face, online) needed for gaining and maintaining employment in diverse business settings.

**Competencies**

1.1.1. Identify the knowledge, skills and abilities necessary to succeed in careers.

1.1.2. Identify the scope of career opportunities and the requirements for education, training,

certification, licensure and experience.

1.1.5. Develop strategies for self‐promotion in the hiring process (e.g., filling out job applications,

résumé writing, interviewing skills, portfolio development).

1.1.6. Explain the importance of work ethic, accountability and responsibility and demonstrate

associated behaviors in fulfilling personal, community and workplace roles.

1.1.8. Identify the correlation between emotions, behavior and appearance and manage those to

establish and maintain professionalism.

1.1.9. Give and receive constructive feedback to improve work habits.

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**Outcome 1.2. Leadership and Communications**

Process, maintain, evaluate and disseminate information in a business. Develop leadership and team building to promote collaboration.

**Competencies**

1.2.1. Extract relevant, valid information from materials and cite sources of information (e.g., First Amendment, Freedom of Information Act).

1.2.2. Deliver formal and informal presentations.

1.2.3. Identify and use verbal, nonverbal and active listening skills to communicate effectively.

1.2.4. Use negotiation and conflict-resolution skills to reach solutions.

1.2.5. Communicate information (e.g., directions, ideas, vision, workplace expectations) for an intended audience and purpose.

1.2.6. Use proper grammar and expression in all aspects of communication.

1.2.9. Identify advantages and disadvantages involving digital and/or electronic communications (e.g., common content for large audience, control of tone, speed, cost, lack of non-verbal cues, potential for forwarding information, longevity).

1.2.10. Use interpersonal skills to provide group leadership, promote collaboration and work in a team (e.g., writer, reporter, designer, director, actor, conductor, technical crew).

1.2.11. Write professional correspondence, documents, job applications and resumés.

1.2.12. Use technical writing skills to complete forms and create reports.

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**Outcome 1.3. Business Ethics and Law**

Analyze how professional, ethical and legal behavior contributes to continuous improvement in organizational performance and regulatory compliance.

**Competencies**

1.3.2. Follow protocols and practices necessary to maintain a clean, safe and healthy work environment.

1.3.3. Use ethical character traits consistent with workplace standards (e.g., honesty, personal integrity, compassion, justice).

1.3.8. Verify compliance with computer and intellectual property laws and regulations.

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**Outcome 1.4. Knowledge Management and Information Technology**

Demonstrate current and emerging strategies and technologies used to collect, analyze, record and share information in business operations.

**Competencies**

1.4.1. Use office equipment to communicate (e.g., phone, radio equipment, fax machine, scanner, public address systems).

1.4.2. Select and use software applications to locate, record, analyze and present information (e.g., word processing, e-mail, spreadsheet, databases, presentation, Internet search engines).

1.4.7. Use personal information management and productivity applications to optimize assigned tasks (e.g., lists, calendars, address books).

1.4.8. Use electronic media (e.g., social media) to communicate and follow network etiquette guidelines.

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**Outcome 1.5. Global Environment**

Evaluate how beliefs, values, attitudes and behaviors influence organizational strategies and goals.

**Competencies**

1.5.2. Describe how cultural intelligence skills influence the overall success and survival of an organization.

1.5.3. Use cultural intelligence to interact with individuals from diverse cultural settings.

1.5.6. Analyze work tasks for understanding and interpretation from a different cultural perspective.

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**Outcome 1.6. Business Literacy**

Develop foundational skills and knowledge in entrepreneurship, financial literacy and business operations.

**Competencies**

1.6.1. Identify business opportunities.

1.6.3. Explain the importance of planning your business.

1.6.6. Identify the target market served by the organization, the niche that the organization fills and an outlook of the industry.

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**Outcome 1.7. Entrepreneurship/Entrepreneurs**

Analyze the environment in which a business operates and the economic factors and opportunities associated with self-employment.

**Competencies**

1.7.5. Develop a business plan.

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**Outcome 1.8. Operations Management**

Plan, organize and monitor an organization or department to maximize contribution to organizational goals and objectives.

**Competencies**

1.8.2. Select and organize resources to develop a product or a service.

1.8.3. Analyze the performance of organizational activities and reallocate resources to achieve established goals.

1.8.4. Identify alternative actions to take when goals are not met (e.g., changing goals, changing strategies, efficiencies).

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**Outcome 1.9. Financial Management**

Use financial tools, strategies and systems to develop, monitor and control the use of financial resources to ensure personal and business financial well-being.

**Competencies**

1.9.8. Identify income sources and expenditures.

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**Outcome 1.10. Sales and Marketing**

Manage pricing, place, promotion, packaging, positioning and public relations to improve quality customer service.

**Competencies**

1.10.2. Determine the customer's needs and identify solutions.

1.10.3. Communicate features, benefits and warranties of a product or service to the customer.

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**Outcome 1.11. Principles of Business Economics**

Examine and employ economic principles, concepts and policies to accomplish organizational goals and objectives.

**Competencies**

1.11.7. Describe how economic performance and culture are interdependent.

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**Strand 3. Written Content Creation**

Learners apply content creation knowledge and skills to use the intended message for entertainment, journalism or marketing purposes.

**Outcome 3.1. Career-based Writing**

Develop basic skills and knowledge related to fact-, entertainment- and marketing-based copy.

**Competencies**

3.1.1. Analyze the writing content and styles of fact-, entertainment- and marketing-based models.

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**Outcome 3.4. Market-based Writing**

Write concise, creative, memorable, sellable copy for advertising, public relations and proposals.

**Competencies**

3.4.1. Research and analyze trends and local markets for opportunities.

3.4.2. Determine the wants and needs of the target audience.

3.4.3. Communicate brand image and product value.

3.4.6. Apply the product, price, promotion and placement components of marketing.

3.4.9. Critique advertisements to ensure the achievement of goals and objectives.

3.4.10. Apply channels of direct mail, online, email, Web and social media strategies.

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**Strand 4. Audio, Video and Photo Imaging**

Learners apply knowledge and skills of photography and videography to capture, engineer and manipulate audio, images and video for a media production.

**Outcome 4.1. Science of Sound**

Apply the characteristics and properties of sound to a professional production.

**Competencies**

4.1.1. Analyze sound by its properties, including amplitude, frequency, wavelength, velocity, diffraction, diffusion, phase and harmonics.

4.1.2. Classify elements in sound transduction, including resistance, balanced versus unbalanced lines and how sound energy is converted into electrical energy.

4.1.3. Identify sound as measured or perceived.

4.1.4. Identify sound pressure level (SPL).

4.1.5. Analyze acoustics and their impact on sound.

4.1.6. Apply the principles of direct sound, early reflection and reverberation.

4.1.7. Deconstruct the four elements of a waveform signal.

4.1.8. Apply the principles of digital audio theory (e.g., sampling rate, Nyquist Theorem).

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**Outcome 4.2. Audio Capturing**

Apply the principles and properties of how sound is measured, converted and perceived to capture an audio recording for professional purposes.

**Competencies**

4.2.1. Determine sound recording requirements.

4.2.2. Compare and contrast microphone properties (e.g., polar patterns, type of transducer) with their intended use (e.g., handheld, wireless, boom).

4.2.3. Determine microphone and speaker placement, according to their directional characteristics.

4.2.4. Record on dual system devices.

4.2.5. Import audio using analog-to-digital interfaces (e.g., Musical Instrument Digital Interface [MIDI], breakout boxes).

4.2.6. Organize a production from audio recording to distributing.

4.2.7. Distinguish among digital media formats (e.g., .mp3, .mp4, .wav, .aiff).

4.2.8. Select a score for production and post-production needs.

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| Pathways | X | Media Arts | X | Performing Arts |  | Visual Design |

**Outcome 4.3. Audio Operations**

Manipulate recordings for professional purposes.

**Competencies**

4.3.1. Produce live sound, tracks and overdubbing (e.g., narrative, voiceover, music).

4.3.2. Apply the principles of compression and limiting.

4.3.3. Differentiate between linear and non-linear transfers.

4.3.4. Synchronize new audio tracks with previously recorded video and audio tracks.

4.3.5. Perform audio mixing, including relative level, spatial positioning, equalization, dynamics processing and effects processing).

4.3.6. Apply virtual mixing techniques.

4.3.7. Apply the principles of time-based effects.

4.3.8. Synchronize sound effects for film, television, radio or live performances.

4.3.9. Adjust sound according to the needs of the environment.

4.3.10. Select and place audio amplifiers, speakers and monitors for the planned effect.

4.3.11. Eliminate feedback by applying principles of electronics equalization.

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**Outcome 4.7. Audio/Video Editing**

Edit post-production audio or video for commercial purposes.

**Competencies**

4.7.1. Compare and contrast linear and nonlinear digital editing systems for audio/video.

4.7.2. Import and log media for editing.

4.7.3. Manage files of digital clips.

4.7.4. Use storyboard techniques to place media on a timeline.

4.7.6. Edit audio or video online and offline with transitions, cutting points, order of shots and continuity.

4.7.8. Mix audio for video through filters, ambient sound, sound effects, equalization (EQ) and matching levels.

4.7.10. Export and upload media in the appropriate format (e.g., print to video, DVD, video file).

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**Strand 6. Digital Design**

Learners apply knowledge and skills of digital design to manipulate and animate new and existing audio, video or photo images to create graphics for internet, broadcast, mobile and other multimedia applications.

**Outcome 6.1. Content Management**

Import, store, export and manage digital assets.

**Competencies**

6.1.4. Import media into the selected application.

6.1.5. Identify the hardware capabilities of various devices and how processor speed, Random Access Memory (RAM), monitor resolution and media storage affect the development and use of digital projects.

6.1.6. Convert file formats for use in editing software and other applications.

6.1.7. Export media in the appropriate format for delivery.

6.1.8. Manage digital assets through organizational techniques (e.g., metadata, keywords, file/folder structure, name conventions).

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| Pathways | X | Media Arts | X | Performing Arts | X | Visual Design |

**Outcome 6.5. Web Page Design**

Design and create webpages to appeal to the end user.

**Competencies**

6.5.2. Explain how bandwidths affect data transmission.

6.5.12. Incorporate audio, video, graphics and animations into a web page.

6.5.18. Transfer files using file compression for transfer or storage.

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| Pathways | X | Media Arts |  | Performing Arts | X | Visual Design |

**Strand 7. Performance**

Learners apply knowledge and skills for performance, including roles, processes, procedures and production design.

**Outcome 7.6. Music Elements**

Distinguish the elements of music through listening.

**Competencies**

7.6.1. Identify pitch, interval, scales, solfege and chords.

7.6.2. Identify meter.

7.6.4. Identify the relationship between melodies and harmony.

7.6.5. Identify the tonality of work.

7.6.6. Identify the rhythmic pattern of a piece of music.

7.6.7. Identify texture and form.

7.6.8. Identify different instrumental and vocal timbres.

7.6.9. Compare and contrast rhythm, patterns and style in a performance.

7.6.10. Analyze examples of a varied repertoire of music, representing diverse styles and cultures.

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| Pathways | X | Media Arts | X | Performing Arts |  | Visual Design |

**Outcome 7.7. Musical Symbols**

Interpret musical symbols.

**Competencies**

7.7.1. Identify music notational symbols from a vocal or instrumental score.

7.7.4. Identify rhythms in various meters.

7.7.5. Interpret articulations, dynamics, expressive symbols and terms.

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| Pathways | X | Media Arts | X | Performing Arts |  | Visual Design |

**Outcome 7.8. Musical Performance**

Perform different styles of instrumental or vocal music in solos and ensembles.

**Competencies**

7.8.1. Apply the elements of music that produce an expressive effect.

7.8.8. Identify matching pitches from two or more sources.

7.8.9. Evaluate a performance, composition, arrangement or improvisation by comparing it to similar or exemplary models.

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**Outcome 7.9. Musical Composition**

Arrange, compose and score music using notation and sequencing software.

**Competencies**

7.9.1. Analyze the form, melody, harmony and rhythm of a composition.

7.9.2. Transpose musical notation.

7.9.4. Arrange pieces for voices or instruments, other than those for which the pieces were written.

7.9.5. Compose or arrange music for voices and instruments.

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