INTERACTIVE MEDIA ARTS LOW RESIDENCY (IMALR-GT)

IMALR-GT 101 Concepts, Culture & Communications (2 Credits)
An introduction to the concepts, questions, and terminology that encompass interactive media arts as it relates to creative expression and critical engagement. This course serves to establish a theoretical and cultural foundation to cultivate a common vocabulary for discussion, analysis and critique, inform creative practice, and foster a community of makers capable of thoughtful reflection, awareness and discourse.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: Yes

IMALR-GT 102 Creative Coding (2 Credits)
A hands-on introduction to programming and software engineering for creative applications. This course will introduce computational thinking and explore fundamental coding concepts, such as order of operations, logic sequencing, data structures, data flow and event-driven interactions in the context of screen-based projects. Iterative assignments will facilitate the development of a final creative code-driven experience. This course will introduce and explore fundamental coding concepts
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: Yes

IMALR-GT 103 Design for Communication (2 Credits)
This course will provide students with practical skills and theoretical frameworks for making and assessing communication through design. Introductory design principles, tools, and techniques will be covered in class, coupled with hands-on experience making and critiquing work. An emphasis will be placed on context and narrative traversing 2D, time-based and 3D media and environments.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: Yes

IMALR-GT 104 Interface Lab (2 Credits)
This production course will survey alternative interfaces with an emphasis towards embodied interactions. Incorporating aspects of physical, tangible and spatial computing, students will be exposed to the internal machinations of systems, networks and sensors that underlie these interfaces. Areas covered include microcontrollers, connected devices, and computer vision amongst others.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: Yes

IMALR-GT 105 Conversations New York (1 Credit)
A class where the entire program will gather to engage in dialogue with local leaders drawn from across the fields of emerging media. Each week, special guests representing a variety of backgrounds and interests including artistic, commercial, non-profit, civic and academic, will address a theme or topic related to the socio-technical landscape of New York City.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: Yes

IMALR-GT 106 Exploratory Making (2 Credits)
In this course, students will deploy exploratory making as a strategy for developing and better understanding their own creative practices. Through engagement with unfamiliar digital media tools and materials, students will develop a tactile understanding of the relationship between form and content; learn to design and critique their own artistic processes and practice; and work through uncomfortable (yet common) moments in the process of making. Over the 5-week session, students will have the opportunity to move from ideation to prototyping across new media and receive robust critique to guide future iterations of research and making.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: Yes

IMALR-GT 201 Connections Lab (4 Credits)
From intelligent chat-bots and video-sharing apps to social media platforms and virtual reality hubs, our world is infused with mediated, networked systems for communication. In this course, students will design and develop their own creative connected web applications. By coding (using javascript) and sharing original online experiences that bring people together in playful yet purposeful ways, students will gain valuable insight into the inner-workings and implications of our connected world.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: Yes

IMALR-GT 202 Critical Experiences (3 Credits)
This course will combine "critical making" and "user experience" to direct personalized practice-based research. Students will engage in a variety of applied research exercises, readings, and ethnographic activities that will encourage thinking and prototyping across a range of media and materials. Specific subject matter will depend on individual student interests, allowing for more personalized areas of focus.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: Yes

IMALR-GT 301 Civic Ecologies (2 Credits)
Modern urban life is tied to a vast array of technologies and material systems. Under the demands of increased global urbanization, city life increasingly influences how critical components of planetary ecologies flow, survive, die and are sometimes reborn anew. What, who and how we choose to incorporate and include (and, therefore, what we reject and exclude) as part of city ecosystems and infrastructures is essential. Civic Ecologies forms a temporary, situated community in Berlin—inclusion into which will itself form part of our discussions—undertaking comparative studies and depictions of the local and global ecologies we are all, already, integrated into and partially responsible for. Emphasizing this central topic of 'integration'—a difficult term that nonetheless evokes how beings, materials, energies and ideas are permitted, prohibited, and eliminated—we explore how to meld with one another, with systems and with natural ecologies, in designing and creating integrative physical experiences, installations, media, as lived metaphors and renewed, modern myths.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: Yes

IMALR-GT 302 Radical Networks (2 Credits)
This course will critically engage with the communication and networking technologies we readily use for ourselves and our communities. Questions around the control of data, software, hardware and infrastructure will be tied to larger themes of access, power, resilience and sustainability. An ethos of artistry and digital activism will be infused throughout the course as students experiment with peer-to-peer networks, DIY methodologies and technologies of resistance.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: Yes

IMALR-GT 303 Virtual Worlds (2 Credits)
The world can be thought of as a work of carefully assembled, organized and presented pieces of fiction that intimately intersect with our own beliefs and experiences. This course will embrace this notion and push forward this suspension of disbelief by architecting and constructing unique virtual histories in the Unity game engine. How can we pick, lay out and program texts, images, films, objects, spaces and procedures to persuade a virtual visitor of the coherence of our world? How can we combine mythical and physical components in a 3D digital medium to turn imaginative spaces into believable places? Drawing on fictional texts, museography, environmental storytelling and procedural rhetoric, this class will explore how we can build untold accounts, alternate realities and possible future worlds.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: Yes

IMALR-GT 304 Conversations - Berlin (1 Credit)
A class where the entire program will gather to engage in dialogue with local leaders drawn from across the fields of emerging media. Each session, special guests representing a variety of backgrounds and interests including artistic, commercial, non-profit, civic and academic, will address a theme or topic related to the socio-technical landscape of Berlin. Students will be expected to actively engage in the course primarily via class discussions along with recommended readings, resources and site visits.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: Yes

IMALR-GT 305 Designing Games (2 Credits)
Most social interactions can be seen as some sort of convention-based, playful series of events, but games tend to be more specific, designed artifacts with rules, stories and mechanics. This course introduces the basics of game design and game development with the Unity game engine, focusing on iterative design and playtesting. As we cover fundamental concepts such as core mechanics, balance, tutorial, economy, systems, role-playing, narrative, conflict and cooperation, we will explore how games can also act as dynamic representations of life, and thus can provide social and political commentaries as well.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: No

IMALR-GT 401 Thesis (3 Credits)
This course is designed to help you conceptualize, define, and develop a culminating Thesis: a self-determined body of work. This includes research and a project or series of projects, documentation and presentation, which reflect the skills and concepts you have explored during the IMA program and starts you along the path you plan to take going forward.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: No

IMALR-GT 402 Designing Change (2 Credits)
This 7-week course, both seminar and production studio, will focus on design as a vehicle for change. As designers we have the opportunity to create products and experiences that can change perceptions, break patterns and introduce new methods and behaviors in ways that can have meaningful impact at both an individual and societal scale. This course combines the practical skills of UX design with the conceptual skills of behavioral psychology to provide a framework for designing products focused on initiating change.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: No

IMALR-GT 403 Local Data: Collection, Creation & Contextualization (2 Credits)
This 7-week course will approach data collection as a local, situated and contextually-bound process, and ask what it means to examine large-scale social issues from a close, specific perspective. Starting from the observation that data is never collected omnisciently or neutrally, students will explore questions of power, context, and knowledge production through reading, discussion, and practical exercises in data collection and representation using both computational (primarily web-based and JavaScript) and analog methods. Students will be asked to work in teams to produce creative work that addresses an issue of common interest. This will require them to engage in collaborative problem solving and collective inquiry, and to take care to emphasize reflexivity and an awareness of their own participation in their creative processes. Potential areas of focus, such as the environment, education or social justice, will be relevant at a global scope but accessible at a local scale. As such, students will be required to identify and leverage salient points of contact at their respective locations as well as integrate local insights and fieldwork into their projects.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: No

IMALR-GT 404 50 Days of Making (2 Credits)
Iteration and its impact on the creative process is the theme of this class. Inspired by ITP's "100 Days of Making", this course will involve 50 days of required, iterative, daily practice. Students will identify a theme, idea or topic they would like to explore for the entire 7 weeks of the class and commit to making or producing a variation on that idea as well as posting social evidence of their work every day for 50 consecutive days. Project direction can focus on building, writing, drawing, programming, photographing, designing, composing or any form of creative expression. Class time will be spent discussing students' progress and reflecting on the creative journey.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: No

IMALR-GT 405 Share Lab Studio (2 Credits)
This 7-week class will be an exercise in collective, collaborative creation. During the first 3 weeks, the class will work together to cultivate, shape and agree upon a collective aspirational vision that can be represented through a creative experience. In the remaining weeks, students will work in smaller teams to produce unique parts of the creative experience that will come together as a unified whole and represent the overarching collective vision of the class. Aspects of speculative design, world-building and community building will be infused into class sessions, discussions, assignments and project work. The class will culminate with a public sharing of the work along with a discussion on the process of creating as a distributed collective.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: No

IMALR-GT 406 Recode (2 Credits)

This course is designed to accommodate students with a range of programming experience by offering two parallel tracks. For students who want to gain greater comfort with code and computation, it is an opportunity to sharpen their skills by reviewing fundamental programming concepts and practicing strategies to systematically develop projects that draw inspiration from the history of creative coding. The goal is to empower students to reflect on their process and teach themselves how to program with greater efficiency and self-sufficiency. For students with more experience, this course is an opportunity to develop independent projects within the structure of a supportive learning community. Examples and exercises will be provided in JavaScript using the p5.js library. However, students are welcome to consult the instructor about working with another programming library, framework, or language with which they have interest or prior experience.

Grading: Grad Tisch Pass/Fail

Repeatable for additional credit: No

IMALR-GT 407 Live! (2 Credits)

This course focuses on designing, developing and delivering multimedia live performances via a virtual platform. The class will have an emphasis on experimenting with different possibilities of virtual performances, pushing the boundaries of the performative medium, and using emerging technologies to create experiences that allow for the unfolding of engaging narratives, and/or generate compelling visuals in real time. We will look at various examples of both online and offline performances, explore how we can apply the technologies we have learned to design performative systems, and discuss methods we can use to make our performances more engaging. Students will practice quickly coming up with ideas and performing in class. A few weeks into the course, students will propose final project ideas and then develop the performances in the following weeks with support from the instructor and residents. The class will culminate in a virtual event featuring solo and/or group performances by the students.

Grading: Grad Tisch Pass/Fail

Repeatable for additional credit: No

IMALR-GT 408 Time (2 Credits)

Time is both fundamental and mysterious. From the 2000-year-old Antikythera Mechanism to modern atomic clocks, humans have long sought to understand temporal patterns in nature, and build mechanisms to measure, reflect and predict those patterns. The Low Res "Time" course will follow in that long tradition, reflecting on the nature of time through a seven-week project to build a novel clock (literal or metaphorical, physical or virtual). We will extend our physical computing skills by taking a closer look at microcontrollers, including internal timing hardware and functions, useful libraries, relevant sensors, and specialized electronic and electromechanical peripherals. We will look at clocks and watches as rich sources of inspiration for industrial and information design. Each student's resulting project will be a functional representation of their personal relationship to time.

Grading: Grad Tisch Pass/Fail

Repeatable for additional credit: No

IMALR-GT 409 Immersive Web (2 Credits)

In Immersive Web, students will break out beyond the confines of static 2D web pages and explore the affordances created by 3D. This course hopes to introduce new avenues for creative expression and experimentation via the web and promote practical web development skills through experiential learning. Students will use libraries such as Three.js, A-Frame, Theatre.js, GSAP, Lenis, and more to create dynamic and immersive web-based experiences that push the boundaries of what is possible online. While there are no course prerequisites for this course, students are expected to have some familiarity with web development principles and technologies, specifically HTML, CSS, and Javascript.

Grading: Grad Tisch Pass/Fail

Repeatable for additional credit: No

IMALR-GT 501 Thesis Studio (3 Credits)

Students will use this class as a vehicle to complete, share and reflect upon their final thesis project. Production support, play-testing sessions, one-on-one instructor meetings, a final formal thesis presentation, a final thesis show and archived documentation will be incorporated into the class curriculum and meetings. Students will also be expected to complete a fully articulated thesis project statement and other related documentation.

Grading: Grad Tisch Pass/Fail

Repeatable for additional credit: No

IMALR-GT 502 Thesis++ (1 Credit)

A seminar style class where students will have an opportunity to further discuss, examine and research the conceptual foundation of their thesis projects. Emphasis will be placed on identifying additional theoretical material relevant to the project's area(s) of inquiry, continuing with relevant academic research, and developing pathways for future project development beyond the completion of the program. This class is well-suited for students who would like to dedicate more time to the thinking and discourse of their thesis as opposed to the implementation and delivery of the final project.

Grading: Grad Tisch Pass/Fail

Repeatable for additional credit: No

IMALR-GT 503 Conversations Shanghai (1 Credit)

A class where the entire program will gather to engage in dialogue with local leaders drawn from across the fields of emerging media. Each week, special guests representing a variety of backgrounds and interests including artistic, commercial, non-profit, civic and academic, will address a theme or topic related to the socio-technical landscape of Shanghai.

Grading: Grad Tisch Pass/Fail

Repeatable for additional credit: No

IMALR-GT 504 Worlding (1 Credit)

This course will combine "world-building", "design-fiction" and "speculative design". Students will be tasked to work as a collective to conjure an alternative world with fictional stories, imaginative works and original artefacts that serve to inspire design discussions and have the capacity to influence our collective futures.

Grading: Grad Tisch Pass/Fail

Repeatable for additional credit: No

IMALR-GT 505 Future Selves (1 Credit)
We all face aging as a part of life, but we often do not consider it as something we need to act upon until we have aged. The aim of this class is to look at how we might create solutions for our "future selves" in anticipation of the inevitability of change that occurs during our lives. The emphasis of the class will incorporate an understanding of our future selves, an idea to solve an anticipated problem, and a presentation of how you intend to solve the problem in a form of an instruction manual for your concept. Production work will focus on instructional design and the creation of a speculative product manual.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: No

IMALR-GT 506 Tech Futures (1 Credit)
This class will be an exercise in scenario development. Working in teams, students will select a current developing technology or technical initiative (e.g. autonomous vehicles, planetary internet access), then flesh out two versions of what happens to this technology by the year 2030. Students will develop one story of widespread adoption and unpredictable uses, and another story of failure, with only limited adoption. Historical examples from the 20th century will be leveraged in the process of describing potential future pathways. The class will culminate with each team presenting their scenarios.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: No

IMALR-GT 507 Trust (1 Credit)
A survey of blockchain, cryptocurrencies and decentralized applications. Class content will entail historical accounts of encryption and secrets, discussions of privacy in the digital age, case studies related to digital money and decentralized finance, as well as hands-on exercises to make sense of the current crypto-landscape. Underlying all of the course material will be questions involving truth, trade and communication.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: No

IMALR-GT 508 Make Art with AI (1 Credit)
An introductory course for students with no prior machine learning knowledge to explore and utilize different experimental machine learning methods such as image classification, pose estimation, body segmentation, pitch detection and k-nearest neighbors algorithm (KNN). Working with a variety of pre-trained models and techniques, students will code artistic, innovative and interactive projects for the web. Both practical and creative applications may be investigated as students will be encouraged to design their own experiences and solutions.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: No

IMALR-GT 509 NIME (1 Credit)
In this "New Interfaces for Musical Expression" (NIME) class, the focus will be on electronics, musical instruments, and live performance. Students will engage in a series of hands-on workshops that involve the use of arduinos, sensors, and the visual programming language Max. The class will culminate with live in-class student performances. No prior experience is necessary.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: No

IMALR-GT 510 Local Data: Collection, Creation and Contextualization (1 Credit)
his course will approach data collection as a local, situated and contextually-bound process, and ask what it means to examine large-scale social issues from a close, specific perspective. Starting from the observation that data is never collected omnisciently or neutrally, students will explore questions of power, context, and knowledge production through reading, discussion, and several practical, location-based field exercises in data collection and representation. Students will be asked to engage in collaborative problem solving and collective inquiry, and to take care to emphasize reflexivity and an awareness of their own participation in their creative processes. There will be three short assignments as part of this class, completed each week, as well as required reading and reflection. Students are also encouraged to bring current topics of interest or investigation into the class for further exploration.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: Yes

IMALR-GT 511 Device Design (1 Credit)
In this class, we will learn how to create functional, durable, and well-designed enclosures for our electronic devices. We will build usable interfaces for game controllers, toys, and playful objects. The class will aim to cover rapid prototyping, digital fabrication, tangible interface design, UI/UX, as well as electromechanical design. We will primarily focus on the exterior of our devices, but a basic understanding of Physical Computing will be necessary with much more emphasis on the P than the Comp. There will be two smaller projects and one final project.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: Yes

IMALR-GT 512 Augmenting Shanghai (1 Credit)
As an emerging technology, Augmented Reality offers designers new possibilities to create immersive experiences that blend digital and physical worlds. Through this course, students will learn how to create 3D models and animations with Gravity Sketch, an immersive 3D creation tool, and Unity, a widely used game engine for AR application development. They will explore how to mount these 3D animations to real places on the NYU Shanghai campus, and design interactive experiences that augment physical space. In addition to learning the technical aspects of AR design, students will also learn the design perspective of dualistic space, a new design field for future human life. Dualistic space explores the relationship between physical and virtual spaces, and how they can interact and coexist to create new experiences and possibilities.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: Yes

IMALR-GT 513 Exhibition Next (1 Credit)
This course is an exploration and observation of the field of museum studies and exhibition design. What is an exhibition in a museum today and how should it be experienced? What is its role in society? How does it engage the audience of tomorrow? Class discussions will include topics and themes such as curatorial practices, public space, content and form, audience and environment, meaningful interfaces and interactive experiences. The class will also explore how emerging technologies can be applied to museum and exhibition design to enhance a visitors' experience. Working in teams, students will focus on one theme, conduct research, collect material/artifacts, curate them, and display them using curatorial methods. Along the way will be visits to local museums and exhibitions as well as meetings with museum insiders to support and direct the work. Also, if possible, students will engage in an instructor-led design challenge in collaboration with a local museum or institution.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: Yes

IMALR-GT 514 Made in China (1 Credit)
In this production course, students will work in small teams to ideate and prototype a wearable or portable consumer electronics product that helps address an unmet or pressing need. They will then take these prototypes to Shenzhen, China's Silicon Valley of Hardware, to understand how they might be manufactured. In the course of their work, students will work alongside professionals and others to learn how to rapidly prototype both "works like" and "looks like" versions of their projects. The class will culminate with a 2-day trip to Shenzhen, where students will meet and present their prototypes to product designers and others within China's manufacturing ecosystem and gain further insights into how these types of products can be produced.
Grading: Grad Tisch Pass/Fail
Repeatable for additional credit: Yes