UNIversity Exchange program
creating UNIque Learning environments for urban HEALTH

Project Director Ester Higuera García
RESEARCH GROUP ABIO
UNIVERSIDAD POLITÉCNICA DE MADRID

*Apply for information. The program offers a grant in ARUP - Madrid, after selection process.
UNI-Health is an European Knowledge Exchange and Innovation Training Program engaging students and researchers from EU Universities in the production of a database of technological advances and applications improving urban health conditions, through Seminars and Working Groups, which will lead to an interactive virtual and open access library, and a final Festival with practical presentations and a Knowledge Exchange Workshop, linking Universities with the market.
Non-clinical Factors and Determinants of Health such as environmental factors are crucial for the formulation of consistent health policies. Promotion of healthy life styles and well-being for all at all ages, requires more data and analysis tools to address health-related issues such as environmental degradation, aging population or climate change factors. A better understanding of this data and its integration to clinical data, will improve not only healthcare services, but also urban services and management.

UNI-Health pursues to review recent advances in design and technologies promoting healthier cities, and exchange knowledge between sectors (education, research, market and citizens). In doing so, attention to environmental parameters relevant to health and the most innovative technologies and solutions to monitor, manage and address this public health related data will be paid, and in turn, specific training on urban health will be provided.

Exchange and Training Program on the urban determinants of public health creating a UNIque learning, experimental and networking environment, being Universities linkage players between technologies developers, communities and decision and policy-makers. It includes Seminars and Working Groups on market advances and best practices open to students and researchers, with mentoring, assistance from a well-recognized company and guest speakers, to create a virtual library and a Workshop and a Festival to discuss the most innovative ideas.
UNI-Health educational methodology is based in an exchange program, structured in two different and complementary parts:

**UNI_Health SEMINARS**

are addressed to **master** and **PhD students** and **researchers** from different fields with expertise in urban design, urban planning, health and policy-making.

The program is open to **public health** and **epidemiology**, **architecture**, **civil engineering**, **forestry** or **agricultural engineering**, **biology** or **IT** students, and related profiles.

**PRICE 360€**

*See detailed information in seminars section.

**UNI_Health FESTIVALS**

are scheduled as **closing event** of the course. The project developed during the seminars and workshops will be presented to the **local administration** and **citizens** involved.

Also there will be **workshops** for citizens and **guided visits** to rise awareness about healthy habits and lifestyle and how **urban environment** can impact on health.

Other activities like **hackatons**, **showrooms** or **exhibitions** will take place during the festival.

**Who can apply?**

UNI-Health educational methodology is based in an exchange program, structured in two different and complementary parts:

- **20 students & researchers**
- **UNI_Health SEMINARS**
- **UNI_Health FESTIVALS**
- *See detailed information in seminars section.*
UNI-Health is a Training Exchange Program focused on healthy urban environment issues. This Program is based on two Pilots:

**AGE-FRIENDLY CITIES**  
Spring: 02/2019 – 06/2019  

**SEMINAR: February - May 2019**  
Study case on a local neighborhood  
Citizen participation  
Simulations and Labs

**FESTIVAL: June 2019**  
Open call for IT developers and stakeholders  
Presentation to local administration  
Citizen workshops

**INNOVATING WITH NATURE FOR HEALTHIER ENVIRONMENTS**  
Fall: 07/2019 – 12/2019  

**SEMINAR: September - November 2019**  
Study case on a local problematic: green spaces  
Citizen participation  
Simulations and Data Visualisation  
VOICE EIT Health Living Labs

**FESTIVAL: December 2019**  
Inauguration of the new Research Centre for Active Ageing  
Open call for IT developers and stakeholders  
Presentation to local administration
The neighborhood: USERA

USERA district is located in the south-east of Madrid. There we can find several Renovation Neighborhoods, created in the middle 70s and 80s to eradicate poor housing settlements in the south-east peripheral area, due to the strong rural migration between 50s and 60s.

It comprises seven quarters: Orcasitas, Orcasur, San Fermin, Almendrales, Moscardó, Zofío and Pradolongo. Its limits are defined by M-40 at south, A-42 at west and north-west and by Manzanares river at east and north-east. It takes a surface of 770,28 hectares with a population of 134,015 inhabitants, according to 2016 data.

The opportunity to work on this area is due to local administration of Madrid, that has planned Madrid + Natural program in Usera district. The main objective is to renovate this area from Julián Marías Square, Pablo Ortiz Street and Tizas Square. This project is included in a more ambitious agenda that aims to create a connection corridor between Manzanares river and Pradolongo Park.

The project “sets the base for renovating the public space from an integral perspective, through the creation of living pathways in Urban Renovation Areas in Madrid city”¹. It aims to coordinate the implementation of smaller projects, through the execution of a first pilot to improve the conditions according to climatic comfort and livability of public space. In this context, it is complementary to other Plans of Urban Renovation in Madrid. All these issues are completely linked with the objectives of this course.

¹ Livable Pathways- Basis for intervention in public space in Urban Renovation Areas, Improvistos 2016.
The project is coordinated by the Research Group **ABIO: Bioclimatic Architecture in a Sustainable Environment**, at the Universidad Politécnica de Madrid (UPM) and the **University of Newcastle**. **ARUP** is the third and external partner of this team, creating a connection outside the academy.

**Research Group ABIO** from the Universidad Politécnica de Madrid shares its experience in **green urbanism** and **nature-based solutions**. They have a strong research background on topics such as climate change, sustainable methodologies, landscape and bioclimatic design, from a theory and practical approach. Their expertise comprises both architectural and urban projects as well as territorial planning strategies, always linked with a **sustainable** and **environment-friendly** approach.

**Newcastle University** has a deep knowledge on **age-friendly communities** and a large expertise on the application of planning strategies to create **healthier communities**. They have developed **innovative tools** and methodologies to **engage citizens** in the urban process towards **healthier environments** and vibrant communities through a collaborative and **co-construction** process.

**ARUP**

**OVE ARUP&PARTNERS S.A.U.** is an international Consultancy, with presence in many European countries, and an extensive **know-how** and experience in research, training and consultancy work to promote **healthy buildings** and **cities**. The **practical approach** and implementation strategies for the data management and urban analysis is a added value to this program, as it offers the opportunity to approach to **real study cases** with specific and applied solutions.
The seminars of this first edition are organized every Monday from February to April of 2019, following this program:

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<thead>
<tr>
<th>Semaforo/October</th>
<th>Seminars</th>
<th>Date and Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>LUNES 4</td>
<td>Inicio curso y presentación/Welcome session and presentation</td>
<td>12-12:30 h</td>
<td>UPM</td>
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<tr>
<td></td>
<td>Bienvenida curso. Presentación del proyecto UNI-Health/Welcome to the course and presentation of UNI-Health project</td>
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<tr>
<td></td>
<td>Coordinadoras UPM: Ester Higuera, Emilia Román, Cristina Gallego, Elisa Pozo</td>
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<td>12:30-14 h</td>
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<td></td>
<td>Salud urbana/Urban Health</td>
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<td></td>
<td>José Fariña Tojo. Profesor Emérito de la Universidad Politécnica de Madrid. Arquitectura, urbanismo y sostenibilidad.</td>
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<td>Almuerzo saludable/Healthy Lunch</td>
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<td>Presentación del taller. Problemática del barrio Usera/Workshop presentation. Local problematic and presentation of the neighborhood Usera</td>
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<td>Coordinadoras UPM</td>
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<td>Proyecto &quot;Itinerarios Habitables&quot;/ Project &quot;Livable Pathways&quot;</td>
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<td>Estudio Impropositos</td>
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<td>Proyecto urbanización tramo de Usera/ Urban and Design Project Usera</td>
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<td>Marcos Montes. Grupo de Estudios y Alternativas 21, S.L (GEA 21)</td>
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<td>17-18 h Debate + Online: PRESENTACIÓN + ACTIVIDAD</td>
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<td>Formación de grupos. Presentación/Group dynamic. Presentation</td>
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<td>Presentación parte online. Introducción página web. Metodología y programa/Online presentation. Introduction to the web. Methodology and program</td>
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<tr>
<td>LUNES 11</td>
<td>Cambio climático y salud/Climate change and health</td>
<td>12-13 h</td>
<td>UPM</td>
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<td>Cambio climático y salud. Temperaturas extremas/Climate change and health. Extreme temperatures.</td>
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<tr>
<td></td>
<td>Cristina Linares. Doctora en Medicina Preventiva y Salud Pública, del Instituto de Salud Carlos III.</td>
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<td>13-14 h</td>
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<td>Evaluación bioclimática con la herramienta HADES/Bioclimatic evaluation through HADES tool.</td>
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<td>Green Building Council España</td>
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<td>Almuerzo saludable/Healthy Lunch</td>
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<td>15-17 h</td>
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<td></td>
<td>La situación de las personas mayores en el Distrito de Usera/The situation of the elderly in Usera District</td>
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<td></td>
<td>Carmen Herrera. Jefa del Departamento de Servicios Sociales de Usera</td>
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<td>17-18 h Debate + Online: ACTIVIDAD</td>
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<td>Por grupos, según temas de análisis. Identificar y presentar tecnologías asociadas a los impactos en la salud del diseño urbano (acústica, sensores térmicos, radiación solar, movilidad, tracking, consumo recursos, sensores calidad aire...)/In groups, divided by topics of analyse. Identify and present technologies of urban design related to health impact (acoustics, sensoring, solar radiation, mobility, tracking, air quality...)</td>
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<td>LUNES 18</td>
<td>La salud psíquica en la ciudad/Psychological health in the city</td>
<td>12-14 h</td>
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<td>Psicología ambiental urbana. Paisaje urbano, espacios públicos y espacios verdes/Urban environmental psychology. Urban landscape, public spaces and green areas</td>
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<td></td>
<td>José Antonio Corraliza. Catedrático de la Universidad Autónoma de Madrid. Experto en Psicología Social y Ambiental.</td>
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<td>Almuerzo saludable/Healthy Lunch</td>
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<td>Entornos urbanos seguros. La perspectiva de género en el diseño urbano. Diseñando para todas las personas/Safe urban spaces. Gender perspective in urban design. Designing for all</td>
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<td></td>
<td>Cristina Gallego Gamazo. Asociación Otro Hábitat. Doctora arquitecta por la UPM. Especialista en procesos de participación inclusivos e integradores.</td>
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<td>17-20 h</td>
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<td>Coordinadoras UPM. VISITA AL BARRIO/NEIGHBORHOOD VISIT</td>
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<td>LUNES 25</td>
<td>Innovación en la tercera edad. Experiencia de Newcastle/Innovating in third age. Newcastle experience</td>
<td>12-14 h</td>
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<td>Salud urbana y envejecimiento activo. Experiencia de Newcastle/Urban health and active ageing. Newcastle experience</td>
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<td>Newcastle Guest</td>
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<td>17-18 h Debate + Online: ACTIVIDAD</td>
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<td>Identificación y coordinación de los diferentes espacios base en el barrio para análisis y desarrollo de propuestas/Identification and coordination of different spaces in the neighborhood as base for analysis and development of proposals</td>
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| **LUNES 4** | Enfoque práctico. Análisis de datos y proyectos/Practical approach. Data analysis and projects | **12-14 h**  
Metodología WELL, certificaciones. Metodología SROI. Buenas prácticas y ejemplos de diseños saludables/WELL methodology and certifications. SROI certification. Good practices of healthy designs
  
*Susana Saiz.* Directora asociada en ARUP sede Madrid. Doctora arquitecta por la Universidad Politécnica de Madrid.  
  
Almuerzo saludable/Healthy Lunch  
  
15-17 h  
Proyecto MODIFICA. La isla de calor de Madrid. Contexto Usera/MODIFICA project. The heat island in Madrid. Usera
  
*Emilia Román.* Profesora Departamento de Urbanística y Ordenación del Territorio de la ETSAM, UPM  
  
**17-18 h Debate + Online:** En grupos, decidir y concretar por temáticas: tipos de sensores, datos, viabilidad, funcionalidad/In groups, decide and concretate by topics: type of sensors, data, viability, functionality
  
**LUNES 11** | Datos ambientales y entornos urbanos/Urban environments and data | **12-14 h**  
Parámetros ambientales, habitabilidad, bioclimática y salud/Environmental parameters, bioclimatic and health.
  
*Ester Higueras.* Profesora Titular de la Universidad Politécnica de Madrid experta en Urbanismo Bioclimático y Entornos Habitables.  
  
Almuerzo saludable/Healthy Lunch  
  
15-17 h  
  
*Carlos Rodríguez Mahou.* Centro de Referencia Estatal de Autonomía Personal y Ayudas Técnicas (CEAPAT)  
  
17-20 h  
Coordinadoras UPM y Carlos Rodríguez. Toma de datos en el barrio/Data analysis and collection in the neighborhood.  
  
**LUNES 18** | Visualización de datos de salud urbana/Visualisation of urban health driven data | **12-14 h**  
Cartografías. Sistemas de Información Geográfica/Cartography. Geographic Information Systems
  
*Pedro Rico Contreras.* Empresa ESRI (ArcGis)  
  
Almuerzo saludable/Healthy Lunch  
  
15-17 h  
  
*Elisa Pozo.* Arquitecta urbanista especialista en programación visual de datos.  
  
17-20 h  
Coordinadoras UPM. Toma de datos en el barrio/Data analysis and collection in the neighborhood
  
**LUNES 25** | Primeros análisis y conclusiones/First analysis and conclusions | **12-14 h**  
  
  
Almuerzo saludable/Healthy Lunch  
  
15-17 h  
  
*Fidel Revilla González.* Consejo sectorial de las Personas Mayores de Madrid.  
  
17-18 h  
Coordinadoras UPM. Primeros análisis y conclusiones/First analysis and conclusions

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<th>DÍA</th>
<th>ABRIL/APRIL</th>
<th>ACTIVIDAD</th>
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| **LUNES 1** | Talleres y tutorías/Workshops and mentoring | **12-14 h**  
Sesión con diferentes especialistas y los vecinos en formulación de propuestas./ Session with the different specialists and neighbors for formulating proposals.
  
Coordinadoras UPM + NCL + Departamento Servicios Sociales Usera  
  
Almuerzo saludable/Healthy Lunch  
  
15-17 h  
Visita laboratorio e instalaciones ARUP/ Visit ARUP’s lab.  
  
*Susana Saiz.* Directora asociada en ARUP sede Madrid. Doctora arquitecta por la Universidad Politécnica de Madrid.  
  
**LUNES 8** | Presentaciones, feedback y revisiones de propuestas y networking/Presentations, feedback, proposal review and networking | **12-14 h**  
Concluciones finales y lluvia de ideas de propuestas de mejora/Final conclusions and brainstorming for improving proposals
  
Coordinadoras UPM + posibles colaboradores + NCL en Streaming  
  
Almuerzo saludable/Healthy Lunch  
  
15-17 h  
Esquemas de estrategias de mejora del barrio e identificación de soluciones técnicas asociadas/Strategy schemes for the improvement of the neighborhood and identification of related technical solutions
  
Coordinadoras UPM  
  
**17-18 h Debate + Online:** Coordinadoras UPM. Publicación online de los resultados/Online publication of results

**SEMANA SANTA/EASTER**

*The price includes:

- Continuous Course UPM Diploma on **Planning and Health in the city**
- (Assistance > 80% and workshop project in teams of 4 people)
- Knowledge on urban design with health criteria
- Lunch “healthy-picnics” every monday at the faculty
- Visits to the neighborhood and exhibition in Madrid
- On-line specialize material and documentation

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**Susana Saiz.**  
Coordinadoras UPM + posibles colaboradores + NCL en Streaming

**Emilia Román.**  
Coordinadora de UPM

**Ester Higueras.**  
Coordinadora de UPM

**Pedro Rico Contreras.**  
Empresa ESRI (ArcGis)

**Carlos Rodríguez Mahou.**  
Centro de Referencia Estatal de Autonomía Personal y Ayudas Técnicas (CEAPAT)

**Elisa Pozo.**  
Arquitecta urbanista especialista en programación visual de datos

**Fidel Revilla González.**  
Consejo sectorial de las Personas Mayores de Madrid. Plan de Acción Madrid Ciudad Amigable con las Personas Mayores

**Emiliano Aránguez Ruiz.**  
Sociedad Española de Sanidad Ambiental. Subdirección de Sanidad Ambiental y Epidemiología. Consejería de Sanidad. Comunidad de Madrid, al SESA, al Observatorio de salud y cambio climático
The festival will be organized on 20th and 21st of June as a closure activity of the course. It will be held between the Escuela de Arquitectura de Madrid and the Junta de Distrito de Usera. Through the activities that will be scheduled during these days, we will have the opportunity to link the academic institutions with companies, start-ups, local administration and local associations from the neighborhood.
Different academic departments can apply to join the program and integrate it in their academic year schedule as complementary formative program. This first edition will focus on active ageing and nature-based solutions towards healthier communities, but it is thought as an open program that will evolve depending on the partnerships, location and background and expertise of the host universities in ongoing editions, and it could be also complemented with practical study cases, broadening thus the knowledge generated with the involvement of more Universities and cities.

UNI-Health will establish a collaborative learning and knowledge exchange framework. Not only will it be developed in the academic context through the training of students, researchers and professionals; but it will create networking opportunities between society and the market. Experiences all around the countries can enrich each local context with study cases that address issues as air quality, feeding, healthy habits and mobility patterns.

Engaging the academic program with start-ups and stakeholders will create a common space for innovation. The international character will reinforce the connections and synergies all around Europe to enlarge the possibilities for development in terms of improvement of health, services and production.
UNI-HEALTH

Information and registration
uni-health@upm.es

PROJECT COORDINATION

Director
Ester Higueras García

Team
Cristina Gallego Gamazo
Elisa Pozo Menéndez
Emilia Román López

Supported by EIT Health
www.eithealth.eu