Global cities face major complex challenges to find smarter, more sustainable and inclusive models of growth.

Creating sustainable smart cities requires cross-sectoral and inter-disciplinary approaches to develop new political, financial, social and cultural models afforded by new technologies and systems.

There was never a more exciting time to be involved in the design and development of cities. How can we adopt renewable energy technologies at scale? How can we best safeguard scarce natural resources and adapt to climate change and extreme weather events? What are the ethical and governance issues arising from new digital technologies and big data? How can we create genuinely sustainable, healthy and equitable communities?

The Master’s Degree in Sustainable Smart Cities from the University of Alabama at Birmingham and Staffordshire University will equip you with the knowledge and skills to help build the sustainable smart cities of the future.
A GLOBAL PARTNERSHIP FOR A GLOBAL CHALLENGE

The University of Alabama at Birmingham (UAB) is a world-renowned research university and medical center based in the City of Birmingham, Alabama. UAB offers a broad curriculum across the arts and humanities; sciences; medicine and health; engineering; and business.

UAB became an autonomous campus within The University of Alabama System in 1969 and currently has over 18,000 students studying at its Birmingham campus.

UAB is recognised among the top 100 universities in the world for life sciences (Academic Ranking of World Universities 2012) and is the largest research institution in the State of Alabama. According to the U.S. News & World Report “Best Graduate Schools” issue, UAB has 14 programs in the top 25 and four in the top 10.

UAB brings its expertise in civil and environmental engineering, public and social healthcare and mobility and transport plus its long and successful track record of delivering 100% online Master’s programs.

Staffordshire University has been providing high quality and transformative Higher Education for 100 years. Today’s 21st Century University offers cutting edge learning and research across computing, digital and creative technologies, the arts, humanities, science, law and business, education, engineering and health.

The University currently has over 16,000 students studying at our campuses in the UK and a further 11,500 studying for Staffordshire University degrees at our partner institutions overseas.

The University’s close links with business and industry means that it is always up-to-date with the latest standards and trends and many of our courses are accredited and recognised by professional associations.

Staffordshire University brings its expertise in computing and digital technologies, sustainable development, environmental management, green infrastructure and renewable energy systems to the Sustainable Smart Cities Master’s program.
THE SUSTAINABLE SMART CITIES MASTER’S PROGRAM

A unique 24 month part-time professional Master’s program delivered 100% online by experienced faculty from the USA and UK

Award Overview

The Sustainable Smart Cities Master’s program from the University of Alabama at Birmingham (USA) and Staffordshire University (UK) is a unique professional postgraduate program that provides an inter-disciplinary grounding in the principles, application and key technologies required to develop sustainable smart cities.

Delivered by experienced faculty at both UAB and Staffordshire University, this genuinely international program will equip you with the knowledge, skills and critical thinking to assess, design and implement sustainable smart cities strategies across the globe.

The program offers a broad curriculum covering sustainability theory, sustainable urban development, low carbon and renewable energy systems, green infrastructure, natural resource management, health and livability, transport and mobility, big data analytics and smart technologies.

Who should take this program?

This program is aimed at leaders and professionals in public and private sector organisations who seek to design, develop, and deliver smart and sustainable urban solutions. It will be suitable for the following:

• Senior Executives, Mayors, and Elected Representatives
• Policy Makers
• Building Services Engineers
• Urban Planners
• Architects
• Urban Designers
• Civil and Transport Engineers
• Real Estate Professionals
• Software Programmers
• ICT Professionals
• Public Health and Social Medicine Professionals
• Environmental and Sustainability Managers
• Social Scientists

This award is particularly suitable for graduates who have been working for a number of years and are looking to take the next step in their career, or professionals seeking a change of direction.
The Master’s in Sustainable Smart Cities is delivered via ten modules:

Principles of Sustainable Development (UAB) - drivers of sustainable smart cities (i.e. climate change, population growth, resource scarcity, etc.) and the principles of sustainable development.

Introduction to Sustainable Smart Cities (SU) - sustainable urban planning and smart growth, engaging with smart citizens, sustainable governance and creating sustainable economic development.


Managing Natural Resources and Sustainable Smart Cities (SU) - water, waste and carbon management, pollution prevention, climate adaptation and resilience and integrated environmental systems management.

Green Infrastructure and Transportation (UAB) - public and open space design, principles of urban design and smart sustainable mobility and transportation.

Green Buildings (UAB) - smart buildings and infrastructure, principles of sustainable construction, sustainable building materials, building and energy management systems and standards and rating systems.

Health & Liveability (UAB) - genomics, health informatics, designing for well-being, environmental justice and food smart cities.

Smart Technologies for Cities & Buildings (SU) - Internet of things, remote sensing and communication technologies at individual building, neighbourhood and city-scale.

Big Data & Smart Cities (SU) - big data platforms and cloud computing, urban informatics, GIS and spatial analysis, measuring impact and data visualization.

Research Methods & Project Planning (UAB & SU) - introduction to research methods and the principles of project planning to enable students to plan for their capstone project.

Capstone Research Project (UAB & SU) - you will design and implement a piece of research that will enable you to reflect on the knowledge and skills which you have learned during your taught modules and apply them to a real world problem or issue. This research may draw on the practical and work-related experiences of the student.

You will have an opportunity to present their capstone project findings at the annual Sustainable Smart Cities Research Symposium hosted by the University of Alabama at Birmingham and Staffordshire University.

Delivery Method
All modules for this Award will be delivered exclusively online using the Canvas and Blackboard Collaborate virtual learning environments which are hosted by UAB. The internet-based delivery will include a combination of lectures, access to resources and materials, webinars and participation in online forums and discussion boards.

The program is highly interactive and you are expected to participate and interact with tutors and fellow students. Each taught module runs a weekly live online tutorial. Students will have access to extensive electronic library resources from both the University of Alabama at Birmingham and Staffordshire University.

Technical Requirements
As the program is delivered 100% online, you will need a PC or Apple Mac running Windows or OSX and an internet connection. In addition, you will need speakers/headphones and a microphone for your computer and an active email account.

Part-Time Study & Flexibility in Learning
The Master’s in Sustainable Smart Cities has been designed as a part-time award to be completed in two full calendar years. However, there is some flexibility for you to adjust the pace to suit your professional and family commitments. It is possible for you to study over an extended period longer than 2 years.

Assessment
Every module contributes to the overall final grade for the Award. To reflect the varied nature of the award content you will be formally Assessed in a variety of formats, including essays, reports, portfolios of tasks, and a range of shorter submitted assignments (including participation in online discussion boards) and in some modules by online examinations.
# Program Structure

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>YEAR 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td><strong>Semester 1</strong></td>
</tr>
<tr>
<td>Principles of Sustainable Development</td>
<td>Green Buildings</td>
</tr>
<tr>
<td>Introduction to Sustainable Smart Cities</td>
<td>Big Data &amp; Smart Cities</td>
</tr>
<tr>
<td>Postgraduate Certificate</td>
<td>Capstone Research Project</td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td><strong>Semester 2</strong></td>
</tr>
<tr>
<td>Low Carbon &amp; Renewable Energy Systems</td>
<td>Health &amp; Liveability</td>
</tr>
<tr>
<td>Managing Natural Resources &amp; Sustainable Smart Cities</td>
<td>Smart Technologies for Cities &amp; Buildings</td>
</tr>
<tr>
<td><strong>Semester 3</strong></td>
<td><strong>Semester 3</strong></td>
</tr>
<tr>
<td>Green Infrastructure &amp; Transportation</td>
<td>Research Methods &amp; Project Planning</td>
</tr>
<tr>
<td><strong>Postgraduate Diploma</strong></td>
<td><strong>Master's Degree</strong></td>
</tr>
</tbody>
</table>

- **Principles of Sustainable Development**
- **Low Carbon & Renewable Energy Systems**
- **Green Infrastructure & Transportation**
- **Green Buildings**
- **Big Data & Smart Cities**
- **Capstone Research Project**
- **Introduction to Sustainable Smart Cities**
- **Managing Natural Resources & Sustainable Smart Cities**
- **Health & Liveability**
- **Smart Technologies for Cities & Buildings**
- **Research Methods & Project Planning**
Things to Consider:

- 2016 Program Tuition: $22,675 USD (~£14,786 GBP).
- Master’s Degrees can be completed in 2 calendar years.
- Designed for professionals who want to interact with their international peers using state-of-the-art online instructional methods (Canvas VLE).
- All related disciplines are welcome to apply in this multi-discipline graduate program.
- Learn from experienced full-time UK and US Faculty.

To start your application:

1. Go to the following link to apply to the UAB Graduate School https://app.applyyourself.com/AYApplicantLogin/fi_ApplicantLogin.asp?id=uab-grad
2. You will need to create login and secure password
3. Accept Terms and Conditions
4. Start Application for “Graduate Degree Seeking” and Certificate
5. Fill in relevant information
   - Biographical Information
   - Application information,
   - Educational Background (Official transcripts must be sent)
   - Personal Essay: Very brief response to why you are interested in the program
   - Provide 3 references and have them reply to the online solicitation
   - NO external GRE, TOFEL required

Entry Requirements

- Honors degree, or equivalent, from an officially recognised institution of Higher Education in an appropriate subject.
- Candidates who have substantial related work experience, with a demonstrable interest in or a commitment to urban planning, sustainability and environmental management issues and/or smart city approaches will also be considered.
- Where specific professional expertise is involved, candidates who do not have a first degree, but who have qualifications or experiences which could be accredited through Accreditation of Prior Learning (APL) are welcome to apply.
- Postgraduate diploma recognised as being equivalent to an honours degree or accredited professional or vocational experience in urban planning / design / management / sustainability related areas of practice will also be considered.
- Applicants who are non-native speakers of English must be able to demonstrate proficiency in English Language and may IELTS standard of at least 6 or TOEFL score of between 60-78 (or equivalent).

How to Apply

For an informal discussion about the Master’s program, please contact:

Dr. Jason Kirby
University of Alabama at Birmingham
Phone: +1 205 934-8479
Email: sscgrad@uab.edu