2023-24 Senior/Postgraduate Teaching Assistant Vacancies

Job Description and Person Specification

Job title: Senior/Postgraduate Teaching Assistant (S/PGTA)
Grade: 6
Reporting to: Module Leaders
Salary: Appointments will be made on the Grade 6 pay scale which ranges from £16.99 to £19.73 per hour (including London Allowance). Appointments are normally made at the start of the scale, with incremental progression following reappointment in subsequent years.
Duration: These appointments will be made on a fixed term basis. Applicants will be required to reapply to the scheme in future academic years.
Hours per week: Hours of work vary across modules. Senior/PGTAs will be paid for training, preparation time, attending lectures and meetings, office hours and marking. The estimated total teaching hours across each module is listed below. Payments will be spread evenly for the duration of each module and a separate record of hours worked will need to be kept and reviewed by the module leader on a monthly basis. All applicants will need to show evidence of their right to work before starting any work. Student Visa holders must work within the guidelines specified in the terms set by The Home Office.

Background:
The Centre for Advanced Spatial Analysis is offering a range of teaching opportunities for postgraduate research students to assist on its Masters' level courses as Senior Post Graduate Teaching Assistants.

Both full and part time students are eligible to apply. Each shortlisted candidate's research supervisor will be asked to provide a short reference outlining the student's research progress and his/her suitability to take on this extra commitment.

Students may apply to assist on any of the modules, and only one application is required. Please complete the attached application form and send it along with your CV to Sandra Starosta [s.starosta@ucl.ac.uk] by **Friday, 28 July 2023**. Unfilled vacancies will continue to be advertised thereafter.

The appointments will be made on UCL's salary structure at grade 6. Post holders will be paid for teaching preparation time and three hours of mandatory training, UCL Arena One Gateway Workshop. More information is available at:
https://www.ucl.ac.uk/teaching-learning/professional-development/arena-one

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Vacancies are available in the following modules:

Term 1

CASA0001 – Urban Systems Theory (135 hours)

- Good knowledge of urban or human geography
- Competence in academic writing and interest in helping students learn this from diverse backgrounds
- Interest in assessing students' essays and providing high quality feedback (under guidance)

CASA0005 – Geographical Information Systems and Science (135 hours)

- Familiarity with R (or a desire to learn it), familiarity with spatial data and other GIS software such as ArcGIS or QGIS
- General knowledge of spatial data
- Basic statistical knowledge
- Ability to troubleshoot problems

CASA0007 – Quantitative Methods (135 hours)

- Essential: Good understanding of descriptive statistics, linear regression, basic clustering methods; experience with Python/JupyterLab/Anaconda/Github
- Desirable: experience with data analysis projects

CASA0013 - Introduction to Programming (135 hours)

- Essential: experience developing and/or doing data science with Python to an intermediate level
- Desirable: familiarity with JupyterLab, Git/GitHub, Markdown, Docker

CASA0014 – Connected Environments (90 hours)

- Good knowledge of Internet of Things, Raspberry Pi, Arduino, InfluxDB and Grafana.
- Happy to help students solder and 3D print objects.
- Competence in writing and interest in helping students communicate via blog posts.
- Interest in assessing students' work in progress (via crits) and providing constructive feedback

CASA0016 – Make Design Build (90 hours)

- Good knowledge of Internet of Things, Arduino and basic electronics.
- Happy to help students solder, make circuits and 3D print objects.
- Competence in writing and interest in helping students document work using GitHub.
- Interest in assessing students' work in progress (via crits) and providing constructive feedback

CASA0017 – Web Architecture (90 hours)

- Experience developing websites to an intermediate level
- Familiarity with HTML, CSS, Javascript, Git/GitHub, Markdow

CASA0019 - Sensor Data Visualisation (90 hours)

- Good knowledge of the Game Engine System Unity3D
- Experience in developing and deploying Augmented Reality Apps on Android Systems (optional iOS)
- Knowledge in data visualisation techniques
- experience in using HMD and Virtual Reality apps (optional)

BPLN0077 – GIS for Planners (90 hours)

- Good understanding of GIS and spatial analysis methods
- Experience of QGIS software
- Understanding of common urban spatial data
- Basic statistics knowledge

Term 2

CASA0002 – Urban Simulation (135 hours)

- Python programming skills
- Understanding of Spatial Interaction models: unconstrained, singly and doubly constrained gravity models.
- Knowledge of network science and use of NetworkX in Python

CASA0003 – Digital Visualisation (90 hours)

- Experience of coding tools for spatial visualisation (e.g. JavaScript libraries, Mapbox, Leaflet, GIS software)
- Experience of working with spatial data, particularly for urban analysis
- Some understanding of cartography and design concepts for data visualization

CASA0006 – Data Science for Spatial Systems (90 hours)

- Essential: good understanding of statistics, machine learning algorithms (e.g. regression/classification/clustering/dimension reduction);
- Essential: experience doing data science with Python/sklearn/pandas;
- Essential: experience with Github, Anaconda, JupyterLab, Github;

CASA0008 – Smart Cities: Context, Policy & Government (135 hours)

- Good knowledge of urban or human geography and/or interest in the smart city discourse
- Interest and competence in leading seminar discussions
- Interest in assessing students' work and providing high quality feedback (under guidance)

CASA0011 – Agent Based Modelling (90 hours)

- Some knowledge of / familiarity with the concepts of agent-based modelling
- Experience working with NetLogo (desirable, but not essential 10 hours are allocated to gaining familiarity with NetLogo)

CASA0018 – Deep Learning for Sensor Networks (90 hours)

- Knowledge of Internet of Things, TensorFlow, Raspberry Pi, Arduino and basic level computer vision.
- Understanding of deep learning to help students build models using TensorFlow and Edge Impulse.
- Interest in assessing students' work in progress (via crits) and providing constructive feedback

CASA0020 – Ethic Sustainability and Business of IoT (90 hours)

- Knowledge of business model canvas, ethics (with a focus on internet of things, data, smart cities) and awareness of the Better IoT framework.
- Understanding of sustainability issues and their impact on technology.
- Comfortable supporting workshop activities and helping facilitate small group discussions.

CASA0023 – Remotely Sensing Cities and Environments (90 hours)

- Familiarity with R (or a desire to learn it), familiarity with spatial data and other GIS software such as ArcGIS or QGIS

- General knowledge of spatial data
- Basic statistical knowledge
- Ability to troubleshoot problems

CASA0025 - Building Spatial Applications with Big Data (90 hours)

- Experience with SQL (ideally PostGIS) and databases
- Familiarity with Google Earth Engine and JavaScript
- Experience handling and querying large datasets

Job Description

Generic Duties and Responsibilities

Post holders can be expected to take on some or all of the following duties:

- To assist teaching fellows, module coordinators, and programme directors in delivering and developing course material as designated by the Director of School in the unit/module where candidates are allocated.
- To mentor students in designated areas of the candidate's expertise.
- Regular meetings with the module coordinator or programme director to discuss any issues and problems arising.
- To uphold confidentiality in regards to student records, marks and extenuating circumstances and any other personally sensitive issues such as medical or other referrals.
- As duties and responsibilities change, the job description will be reviewed and amended in consultation with the post holder.
- The post holder will carry out any other duties that are within the scope, spirit and purpose of the job as requested by the line manager or Director of School.
- The post holder will actively follow UCL policies including Equal Opportunities and Race Equality policies.
- The post holder will maintain an awareness and observation of Fire and Health & Safety Regulations.

Each post is unique and the duties will vary depending on arrangements of teaching in each module. Additional duties, in the spirit of the Senior PGTA post, may include:

- Leading a student seminar or workshop
- Essay or coursework marking
- Offering students formative verbal or written feedback
- Holding office hours
- Offering administrative support
- Accompanying teaching staff and students on field trips

Person Specification

Essential

- Working towards a postgraduate research degree (PhD/EngD.
- A desire to gain teaching experience in a built environment discipline.
- Disciplinary knowledge and, if applicable, specialist skills of the subject area of the programme/unit/module.
- Ability to communicate clearly, both orally and in writing, with students and staff.
- Excellent organisational and time-management skills.
- Ability to be flexible in terms of research workload and other commitments.
- Ability to work independently for short periods and as part of a team, recognising when advice / input needs to be sought.
- Available for the three hour mandatory UCL Arena One Gateway Workshop, if not previously attended.
- Commitment to UCL's policy of equal opportunities and the ability to work harmoniously with colleagues and students of all cultures and backgrounds.
- The ability to meet deadlines

Desirable

- Knowledge and experience of Moodle (virtual learning environment).

Additional Information

- Postgraduate Teaching Assistantships offer students a valuable introduction to university teaching. For postgraduate research students, teaching is considered as part of the skills audit within the research student log and training credit should be recorded for each duty undertaken.

- Since the number of students on some courses is not known until after the start of term, the department reserves the right to make last-minute adjustments to teaching loads or timetables.

- Senior/PGTAs are expected to follow directions and report directly to the unit/module instructor and/or programme coordinator.