

City of London - Application for Appointment to City of London Community Advisory Committees

Application

Committee you are interested in serving on: **Environmental Stewardship and Action Community Advisory Committee**

If applying for the Accessibility Community Advisory Committee, please select: **No, I am not an applicant with a disability.**

If applying for the Ecological Community Advisory Committee, a professional designation, education or experience in related fields is a requirement based on the technical nature of the committee work. Please indicate your area(s) of expertise:

If you selected 'Other', please specify:

Contact Information

Name: **Nourwanda Serour**

City: **London**

Province: **ON**

Postal Code: **N6G 3B2**

Experience and Qualifications

If you have experience on a London Advisory Committee, please provide dates and details. (max. 250 characters): **This is my first time applying for a volunteering position in the city of London, I am currently volunteering at Western University in leadership positions.**

What do you hope to contribute or learn as part of a Community Advisory Committee? (max. 250 characters): **I hope to share my vision in regards to implementing sustainability measures that preserve the environment given that my studies are related to the environmental field as I am a Ph.D. student at Western University in biochemical engineering and my thesis project is related to the environment. Given the technical experience I have and living in the community for a fairly good period, I believe that we can come up with ideas that can enhance environmental sustainability in our city. I believe that I will learn a lot from other committee members through sharing different perspectives, ideas, and visions.**

How will you support the work of a Community Advisory Committee? (max. 250 characters): **Currently, as a resident of the city and as a student at Western, I will share with the committee the environmental issues from the perspective that I see in my day-to-day life and will share suggestions and potential solutions to those issues from the engineering perspective and discuss how it could be applied and whether it will fit or not in our community.**

Please describe additional experience, training, or community involvement that will help you in your role as a Community Advisory Committee Member. (max. 250 characters): **- I volunteered as an educator in the teaching team of the "How to Change the World" program held at western in November 2021, where the role of the teaching team was to guide participants in their ideation phase via design thinking for achieving specific sustainable development goals set by the united nations
- I was involved in many environmental projects as I mentored an elementary school student on a project that utilized plastic wastes for competing in an international competition, also my Bachelor's degree thesis project involved utilizing waste cooking oil for the production of biofuel
- I have studied chemical engineering for my master's degree and currently for my Ph.D. I am studying green extraction methodologies for the production of biopesticides, so I have a fair amount of technical knowledge in environmental engineering and I am aware of some of the challenges that we can face when implying sustainable and environmental solutions.**

Attach resume or other document here, if needed: **Nourwanda Serour - CV.pdf**

Attach more files here, if needed:

Confirmations

I declare the following: **I am a resident of London. ; I am at least 18 years old.; I am not a City employee or Council member.; I understand that the commitment may be up to 4 hours per month to attend meetings and prepare.; I understand that my application and any attachments will be included on a public agenda that is published on the City website.**

To help inform our outreach activities, please tell us how you heard about this opportunity:
(optional): **Social media**

If you selected 'Other', please specify:

Submitted on: **4/21/2022 3:54:49 PM**

Nourwanda Serour

London, Ontario,
Canada N6G 3B2

EDUCATION

Doctor of Philosophy in Chemical and Biochemical Engineering **January 2020 – December 2023**

Department of Chemical and Biochemical Engineering, Western University, Ontario, Canada

- Research discipline: Reactions and process systems
- Grade: 94.11 %

Master of Science in Chemical Engineering **September 2013 - January 2019**

Faculty of Engineering Alexandria University, Egypt

- GPA: 4 / 4
- Thesis title: Preparation of Graphene/Titanium Dioxide Nanocomposite and Investigating its Hydro-dynamic and Convective Heat Transfer Performance as a Nanofluid in Micro-Double Pipe Heat Exchangers

Bachelor of Science in Gas and Petrochemicals Engineering **October 2008 – June 2013**

Faculty of Engineering Alexandria University, Egypt

- GPA: 3.93 / 4, First on class (Excellence)
- Thesis Title: Production of Biodiesel from Waste Cooking Oil using Nano Wood Ash as a Catalyst.
- Thesis Grade: A (Excellence)

PUBLICATIONS

- Journal Research Paper: Nourwanda M. Serour, Ahmed H. El-Shazly, Dina A. El-Gayar, Shaaban A. Nosier, "Heat-transfer and hydrodynamic performance investigation of graphene-titanium dioxide composite nanofluid in micro-heat exchangers", The Canadian Journal of Chemical Engineering, Wiley Publishers, December 27, 2020 (DOI: 10.1002/cjce.24017).
- Journal Research Paper: Nourwanda M. Serour, Ahmed S.E. Hammad, Ahmed H. El-Shazly, Dina A. El-Gayar, Shaaban A. Nosier, "Novel Green Micro-Synthesis of Graphene-Titanium Dioxide Nano-Composites with Photo-Electrochemical Properties", Current Nanoscience (2019) 15: 606, Bentham Publishers, Status: Published 2019 (<https://doi.org/10.2174/1573413715666181212123137>).
- Book Chapter entitled: "Intelligent Nano Sensors (INS) for environmental Applications" in the Handbook of nanomaterials for sensing applications 1st Edition, Elsevier Publishers, April 1, 2021.
- Journal Review Paper: Nourwanda M. Serour, Ahmed H. El-Shazly, Dina A. El-Gayar, Shaaban A. Nosier, "A Review on Titanium Dioxide Based Nanofluids: Synthesis and Stabilizing Techniques in Both "Pure (Single System) and Mixed (Hybrid System) Base Fluids", Materials Science Forum, 1008, 53–71, Trans-Tech Publications, Status: Published 2020 (<https://doi.org/10.4028/www.scientific.net/msf.1008.53>Key Engineering Material).
- Conference Paper: "The Use of Graphene to Improve the Thermal Performance of Nano-TiO₂ Photocatalyst in Stirred Tank Reactors", 8th World Conference and Expo on Nanoscience and Nanotechnology, Philadelphia, USA, February 17-18 in 2020.
- Conference Paper: "Modified Green One-Pot Synthesis Method for the production of Graphene Titanium Dioxide Nano-Composite using a Micro-reactor", Role of Engineering Towards a Better Environment (RETBE'17) International Conference, Alexandria, Egypt, 19-21 December 2017.

Nourwanda Serour

AWARDS

- The E.G.D. Murray Scholarship recipient in Biochemical Engineering in 2022, valued: 2500 CAD.
- STEM Star of the Year, Highly Commended, Egypt Petroleum Show, EGYPS 2022.
- Mitacs Accelerate Internship, valued at 10,000 CAD per semester, start date: May 2021.
- The E.G.D. Murray Scholarship recipient in Biochemical Engineering in 2021, valued: 2500 CAD.
- Graduate Research Assistantship (Graduate Fellowship) (Dec. 2020 – April 2021). (Paid Ph.D. Tuition Fees + Annual Salary 13K per year).
- Western University Certificate in Curriculum, Teaching, and Learning in the STEM Disciplines Awarded (Valued 1425 \$).
- STEM Star of the Year, Finalist, Egypt Petroleum Show, EGYPS 2020.
- Spot Award acknowledging excellent assistance to the QATARGAS Engineering team in 2014 (Valued at 500 QAR).
- EUCYS 2012 Special Award (Summer internship at Culham Science Centre, UK).
- Alexandria University Scholarship for outstanding undergraduates (70% annual tuition fees reduction).

WORK EXPERIENCE

Western University **January 2020 – Present**

Research Assistant, Chemical and Biochemical Engineering, Western University, Ontario, Canada.

- Joint project between Western University, Suncor Agro-science, and Natural Resources Canada.
- Design, conduct, and troubleshoot experiments.
- Analyze and interpret data outcomes.

Western University **August 2021 – December 2021**

Academic Success Program Peer Coach

- Coaching and supervising upper-year student leaders, with a goal of ensuring congruency in how the program is delivered among student groups in the Engineering Faculty.

Western University **September 2020 – Present**

Teaching Assistant, Chemical and Biochemical Engineering, Western University, Ontario, Canada.

- Courses:
 - Sustainable Chemical Engineering and Life Cycle Assessment Winter 2022
 - Bioreaction and Bioprocess Engineering Fall 2021
 - Green Process and Plant Design Fall 2020 - Winter 2021, mentored and supervised three groups of students conducting full chemical/biochemical process design that achieved first or second place in their category in the 15th Annual Capstone Design Competition.

Egypt Japan University of Science and Technology **February 2019 – December 2019**

Teaching /Research Assistant, School of Chemical and Petrochemical Engineering, Alexandria, Egypt.

Faculty of Engineering, Alexandria University **October 2014 – January 2019**

Researcher, Chemical Engineering Department, Alexandria, Egypt

- Research focus: Nanotechnology, microfluidics, and heat transfer performance enhancement.

QATARGAS **July 2014 – September 2014**

Process Engineer-in-training, Project Management Team, QG2 and QG3&4 Flare Reduction Project, Doha, Qatar

- Skills: HAZID analysis & Project Management procedures.

Faculty of Engineering, Alexandria University **September 2013 – June 2014**

Nourwanda Serour

Teaching Assistant, Gas and Petrochemicals Engineering Department, Alexandria, Egypt

Culham Centre for Fusion Energy

July 2012

Intern, Culham, Oxford Shire, England, UK

- EFDA Fusion Research in Europe, Joint European Torus Project.
- Presented research findings (compiled as a team) regarding “Production of Biofuel from Plastic Wastes” that won a special award in EUCYS 2011 held in Finland.

Alexandria Fertilizers Company

August 2012 – September 2012

Process Engineering Intern, Abu-Qir, Alexandria, Egypt

- Specialization: Production of fertilizers and storage (Synthetic Gas Production, Urea Production).

Egyptian Natural Gas Company (GASCO)

July 2011 – August 2011

Process Engineering Intern, Western Desert Complex, Al Ameryah, Alexandria, Egypt

- Specialization: Processing and treatment of natural gas (LPG Production using turbo expansion).

Egyptian Liquefied Natural Gas Company

July 2010

Process Engineering Intern, Idku, Alexandria, Egypt

- Specialization: Natural gas liquefaction process (Metering station, Cascade Liquefaction Cycle).

Alexandria Petroleum Company

August 2009

Process Engineering Intern, Alexandria, Egypt

- General Training: Oil processing and refining.

CERTIFICATIONS

- Ivey Business School, Business Sustainability: New Theoretical Perspectives and Opportunities in Management, Fall 2020, Average: 93%.
- The Monarch System Inc., Level 1 training on the Application of Motivational Interviewing and Coaching Skills in Health Behavior Changes, 2021.
- School of Graduate and Postdoctoral Studies, Western University:
 - Developing Leadership Character Course, Ian O. Ihnatowycz Institute for Leadership at Ivey Business School, Winter 2020.
 - Writing for Success in Graduate School and Beyond I & II Courses, Summer 2020 & 2021.
 - Promoting Resilience During Graduate School and Beyond Course, Winter 2021.
- Thompson Centre for Engineering Leadership and Innovation, Western University:
 - Technology Commercialization, summer 2021
 - Business Acumen, summer 2021.
 - Project Management for Research Students, summer 2020.
- Western Continuing Studies, Certificate in Curriculum, Teaching, and Learning in the STEM Disciplines (2020/2021):
 - CTLS6201 Designing Responsive Curriculum, Fall 2020.
 - CTLS6202 Creating Effective Opportunities for Learning, Winter 2021.
 - CTLS6203 Assessing Learning, Spring 2021.
- Master the Entrepreneur Skillset, Entrepreneurship/Entrepreneurial Studies, Western University, Ontario, Canada in 2020.
- ACS Reviewer Lab certificate in 2020, including principles of high-quality peer review for writing a constructive review.
- Process and Petrochemical Engineering Diploma in 2018, Accredited from Egyptian Ministry of Petroleum, and Oil and Gas skills Center.

Nourwanda Serour

- Elsevier Research Academy Modules in 2018.
- HAZOP Application in Petroleum Industry at Oil and Gas Skills center and Northern Alberta Institute of Technology (NAIT) in 2011.

VOLUNTEERING ACTIVITIES

- Educator, How to Change the World program, held at Western University, November 2021, mentored students who were guided to tackle real-world sustainability and innovation challenges using the framework of the UN Sustainable Development Goals (SDGs).
- VP Internal Graduate Engineering Society, Western University, July 2021 – Present.
- Career Profile Advisor, Western University's Employment Resource Center, 2020 - Present.
- Academic committee member, Society of Graduate Students, Western University, May 2021 – Present.
- Chemical and Biochemical Engineering Department Steward, PSAC 610, Western University, October 2021 – Present.
- Peer reviewer, Chemical Engineering Journal, Elsevier, June 2018 – Present.
- Volunteer and member, Ontario Society of Professional Engineers 2020 - Present.
- Member of the Organizing Committee of the Second International Conference of Chemical, Energy and Environmental Engineering (ICCEEE'19), Egypt Japan University of Science and Technology in 2019.
- Mentor, Bibliotheca Alexandria Science and Engineering Fair in 2010/2011.
- Member, Science Committee, Students Union, Faculty of Engineering, Alexandria University in 2009/2011.
- Vice Head Public Relations, Society of Petroleum Engineers, Alexandria Student Chapter in 2011/2012.
- Participant in Society of Petroleum Engineers' Educational week in 2011/2012.
- Data coordinator, Oil, and Gas skills center, Alexandria, Egypt, in 2011.
- Head of Academic Chemical Department Committee at the Engineering Placement conference in 2010.

CORE COMPETENCIES

- Process simulation and optimization using Aspen HYSYS and COMSOL Multiphysics
- MATLAB, AutoCAD, and Microsoft Office (Excel, Word, and PowerPoint)
- HAZID and HAZOP analysis
- Excellent presentation, negotiation, and communication skills
- Project management procedures and technical writing.

LANGUAGES

- English: fluent
Academic and General IELTS overall band scores are 7.5 and 8, respectively.
- French: fair reading and speaking
- Arabic: Native