# Resolution for Proposal for
# A Micro-Credential in the Foundations of Neuropsychpharmacology

**WHEREAS**, the Department of Psychology proposed a **Micro-Credential in the Foundations of Neuropsychpharmacology**, and

**WHEREAS**, the proposed micro-credential would help students develop the basic knowledge of brain science, neuropharmacology, drug action in the brain and related psychological functioning, and

**WHEREAS**, the proposed micro-credential would help students gain the skill set that is useful in the growing field of healthcare[1], and

**WHEREAS**, the proposed micro-credential consists of four undergraduate courses which are part of an undergraduate degree and a minor, and

**WHEREAS**, the proposed micro-credential is built on existing courses and thus requires no additional resources,

**THEREFORE, BE IT RESOLVED** that the Faculty Senate approve the proposed **Micro-Credential in the Foundations of Neuropsychpharmacology**.

Submitted by Curriculum and Academic Planning Committee (CAP), May 8, 2020

The Proposal approved by CAP on May 8, 2020

[CAP Membership]
Maria C. Bustamante, Tejas Bouklas, Ruomei Gao,Yu Lei, Anissa Wicktor Lynch, Lorenz Neuwirth, Sheyi Oladipo, Frank Sanacory, Ryoko Yamamoto (Chair)

[1] According to the Office of New York State Comptroller, employment in healthcare occupations are projected to grow by 14% during 2018-2028.

**Psychology Department Proposal for *Micro-credential in in The Foundations of Neuropsychopharmacology***

***A. Purpose***

The Psychology Department would like to offer a *Micro-Credential in The Foundations of Neuropsychopharmacology.* It is designed for students aspiring towards careers related to the neurosciences (see *Note below) which are broadly in the Health, Allied Health, Basic Research/Industry, and Pharmacy/Pharmaceutical areas.

The courses comprising the *Micro-Credential in The Foundations of Neuropharmacology* will allow students to gain a solid foundational grounding in brain science (*i.e.,* anatomy and physiology of the central nervous system) and the molecular and biochemical basis of information processing with a specialized focus on neuropharmacology, drug action in the brain and related psychological functioning.

While the Micro-Credential will be available to all interested students, students majoring in Psychology, Biology, Chemistry and Physics, Computer Science, and Public Health will be likely to have the pre-requisites for the courses required for the Micro-credential, and therefore will only need to take the courses required for the Micro-credential. Students majoring in a discipline other than those specified above, will need to complete the prerequisite courses in order to complete the Micro-Credential program. The Micro-credential is stackable towards earning the *Minor in Neuropsychology*.

**Note:* ***Definition of Neuroscience and related fields***
A program that focuses on the interdisciplinary scientific study of the molecular, structural, physiologic, cognitive, and behavioral aspects of the brain and nervous system. Includes instruction in molecular and cellular neuroscience, brain science, anatomy and physiology of the central nervous system, molecular and biochemical bases of information processing, behavioral neuroscience, biology of neuro-psychiatric disorders, and applications to the clinical sciences and biomedical engineering *(NCES, Classification of Instructional Programs (CIP), CIP Code 261.1*

***B. Demand***

Healthcare employment in New York rose by more than 185% over the past decade, which resulted in doubling the pace of overall State employment growth. Unlike most industries, New York's healthcare sector continued to add jobs throughout this period. This is particularly notable as this period included during and immediately after the recession of 2007, as an aging population presents with the challenges of longer life expectancies that in turn contribute to the increased demand for healthcare services. The U.S. Bureau of Labor Statistics and the State Department of Labor project continued robust job growth for this employment sector in coming years.

New York, like the rest of the nation continues to battle the drug addiction and opioid crises. In New York, the rate of increase of overall drug overdose deaths showed a slight decrease from in 2018, compared to the peak rate of increase in 2017. However, the deaths involving synthetic opioids (including fentanyl and fentanyl analogs) has continued to rise (drugabuse.gov/opioid-summaries-by-state/new-york). Employment of substance abuse, behavioral disorder, and mental health counselors is projected to grow 22 percent from 2018 to 2028, much faster than the average for all occupations, according to the U.S. Bureau of Labor Statistics (https://www.bls.gov/ooh/community-and-social-service/substance-abuse-behavioral-disorder-and-mental-health-counselors.htm)

The proposed Micro-credential in *The Foundations of Neuropsychopharmacology* identifies and makes visible skills and competences that would facilitate students' access and entry into this area of the healthcare industry. In addition, the demographic shift towards an aging population also underscore the needs from future employees to have a solid/foundational understanding *Neuropsychopharmacology* as aging-related disorders are coupled with cognitive declines and the need to use psychotropic and psychiatric medications in the amelioration, and alleviation of, or in the prophylaxis for, age-related fronto-executive disorders/syndromes.

The average annual wages in New York's healthcare industry has increased continuously over the past decade. Growth in healthcare wages have outpaced that of other industries over the same time-period, despite a relative slowdown in the past four years (DiNapoli, 2018; https://www.osc.state.ny.us/reports/economic/health-care-employment- 2018.pdf ).

Employment of healthcare occupations are projected to grow by 14% from 2018 to 2028, much faster than the projected average for all other occupations, adding about 1.9 million new jobs. Healthcare occupations are projected to add more jobs than any other occupation during this same time-period. This projected growth is mainly due to an aging population, leading to greater demand for modern and cross-disciplinary healthcare services (DiNapoli, 2018).

The median annual wage for healthcare practitioners and technical occupations (*e.g.,* registered nurses, physicians and surgeons, and dental hygienists) was $66,440 in May 2018, which was higher than the median annual wage for all occupations in the economy of $38,640 (*i.e.,* a 58.16% increase; DiNapoli, 2018).

Employment of life, physical, and social science occupations are projected to grow by 7% from 2018 to 2028, faster than the average for all other occupations, which will result in about 97,400 new jobs. Thus, there will be an increasing demand for expertise in the sciences, particularly in occupations involved in biomedical research, psychology, cognitive disorders, pharmacology and drug development, energy management, and environmental protection, is projected to result in employment growth (DiNapoli, 2018).

The median annual wage for life, physical, and social science occupations was $66,070 in May 2018, which was higher than the median wage for all occupations of $38,640 (*i.e.,* a 58.48% increase; DiNapoli, 2018).

***C. Resources***

All of the courses listed for the *Micro-credential in The Foundations of Neuropsychopharmacology* are currently offered regularly by the Psychology Department. Therefore, there will be no additional resource needs to implement the proposed *Micro-credential in The Foundations of Neuropsychopharmacology* at Old Westbury. The Psychology Department has recently hired a new faculty member that is beginning in the Fall of 2020 that could cover courses in this area to support the course offerings from the Psychology Department.

***D. Cost, Financial Aid, Stackability, and Portability***

Since the courses in the Micro-credential are part of the regular course offerings from the Psychology Department, the cost will be same as the regular per-credit cost for courses taken as part of the regular academic program for students. Psychology majors will be able to utilize financial aid. For students who are not Psychology majors, micro-credential courses will be eligible for financial aid if they fall within the college elective component of the student's degree program (as with a minor).

As stated earlier, the *Micro-credential in The Foundations of Neuropsychopharmacology* is stackable to the *Minor in Neuropsychology* and to the Psychology major. However, there can only be a one course overlap between the Psychology major and *Minor in Neuropsychology*.

The courses required for the Micro-credential are regular for-credit Old Westbury classes, and therefore will be transferrable to other SUNY institutions according to their relevant policies. Information about the Micro-credential will be included in all marketing materials publicizing this program accordingly in conjunction with the Academic Affairs, the School of Arts and Sciences and the Psychology Department.

***E. Title***

The proposed name, the *Micro-credential in The Foundation of Neuropsychopharmacology,* is not the title of any registered degree or certificate program in New York State

***F. Assessment***

The *Micro-credential in The Foundations of Neuropsychopharmacology* will be assessed along with the Psychology major and the *Minor in Neuropsychology,* as part of the Departments regular 5 year Review process.

***Additional Materials***

This is the Catalog copy for the *Micro-credential in The Foundations of Neuropsychopharmacology.*

***Micro-credential in The Foundations of Neuropsychopharmacology* (16 credits)**

The *Micro-credential in The Foundations of Neuropharmacology* is intended for a broad range of students interested in careers within or related to the following fields: psychology, forensic/criminal sciences, Health (*e.g.,* medicine, osteopathy, pharmacy, and veterinary medicine) and Allied Health (*e.g.,* nursing; occupational, physical, and rehabilitation therapy) developmental disabilities, special education, mental health counseling, basic and clinical research. Additionally, the skills acquired in this micro-credential can be applied work with individuals with cognitive disorders, fronto-executive disorders/syndromes, developmental disabilities, and other aging populations, and in the fields of rehabilitation and occupational therapies. Courses taken for this Micro-credential are also courses which and ne taken in partial fulfillment of the Psychology major, the Neuropsychology Minor, and the pre-Health and pre-Allied Health programs of study.

***Requirements***

Students are required to take 16 credits by completing both of the following group of courses with a grade of "B" or higher:

**Micro-credential in *The Foundations of Neuropsychopharmacology***

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|---|---|
| PY 3610 | Brain and Behavior |
| PY 3620 | Drugs and Behavior |
| PY 4610 | Clinical Neuropsychology |
| PY 4402 | Neuropsychopharmacology |

***Skills and Competencies to be Gained***

*The Micro-credential in The Foundations of Neuropsychopharmacology* will provide students with foundational knowledge in:

- Anatomy and physiology of the central nervous system
- molecular and biochemical basis of neurotransmitter signaling across various brain regions as well as cortical and sub-cortical systems with as specialized focus on neuropharmacology drug action, affinity, efficacy, tolerance
- differentiation between instrumental medication drug treatment and recreational drug use and abuse
- understand the biological basis of psychological and psychiatric disorders