Code: **QF661**

Name: **Química Aplicada**

Name in English: **Applied Chemistry**

Name in Spanish: **Química Aplicada**

Subject type: **Weekly**

Approval Type: **Grade and Attendance**

Characteristic: **Regular**

Frequency: 75%

Period Type / Offering period: Semester / All periods

Requires Final Exam: Yes

Vectors

T	L	P	O	PE	OE	SL	WEEKS	CREDITS
4	**-**	**-**	**-**	**-**	**-**	**4**	**15**	**4**

Occurrence on curriculum: **05, 50**

Pre requirement: ***QF531**

Summary: **Materials: polymers and other materials. Colloids and surfaces: surfactants, foams, wettability, detergency, stability, and properties of dispersions.**

Program:

Introduction to polymers; thermal properties; mechanical properties; blends and composites; polymerization; processing and additives; biodegradable and recyclable polymers. Polymer solutions and rheology.

Colloids and surfaces: surfactants properties and association, foams, emulsions, wettability, detergency, stability, and properties of dispersions.

Basic Bibliography

1. MYERS, D. Surfaces, **Interfaces, and Colloids: Principles e Applications**, 2. ed. New York:Wiley-VCH, 1999. E-book.

2. SHAW, D. J. **Introduction to Colloid and Surface Chemistry**, 4. ed. Oxford:Butterworth-Heinemann, 1992. E-book.

3. SPERLING, L. H. **Introduction to Physical Polymer Science**, 4. ed., New York: John Wiley; 2006. E-book.

Supplementary Bibliography

1. EVANS, D. F; WENNERSTRÖM, H. **The Colloidal Domain: Where Physics, Chemistry, Biology, and Technology Meet**, 2. ed., New York: VCH, 1999.

2. ROSEN, M. J. **Surfactants and Interfacial Phenomena**, 3. ed., New York: Jonh Wiley, 2004. E-book.

3. ROSS, S.; MORRISON I. D. Colloidal Dispersions: **Suspensions, Emulsions and Foams**, New York: John Wiley, 2002.

4. CANEVAROLO JR., S. V. **Técnicas de Caracterização de Polímeros**, São Paulo: Artliber, 2004.

5. YOUNG, R. J. **Introduction to Polymers**, 2. ed., Boca Raton: CRC, 1991.