

INDUSTRIAL LIFE SCIENCE (ILS)

ILS 520 Laboratory Safety and Management Credits: 3

Typically Offered: Spring (even-numbered years).

Course Description: Covering chemical safety, biological safety, chemical management, risk management, industrial toxicology, industrial hygiene, best practices, chemical compatibility, and regulatory controls and compliance. **Prerequisite(s):** Graduate standing in MAS ILS program.

ILS 530 Principles of Quality Assurance Credits: 3

Typically Offered: Fall (even-numbered years).

Course Description: Covering Good Laboratory Practices (GLP), Good Manufacturing Practices (GMP), quality control, process monitoring and control, statistical methods, record keeping, and regulatory compliance.

Prerequisite(s): Graduate standing in MAS ILS program.

ILS 640 Principles of Industrial Scale-up and Production Credits: 3

Typically Offered: Fall (odd-numbered years).

Course Description: Topics include industrial chemical and biotechnology processes and process scale up, catalysis, process monitoring, green chemistry, and industrial scale preparations. **Prerequisite(s):** Graduate standing in MAS ILS program.

ILS 680 Intellectual Property in the Scientific Setting Credits: 2

Typically Offered: Summer (even-numbered years).

Course Description: Physical limitations to present technologies will be examined along with the use of chemistry and biology to identify potential opportunities for new venture creation. The course will provide experience in using life sciences for the identification of incremental improvements and as the basis for alternative technologies.

A proposal for a new business venture with applications in the life sciences will be required. Case studies will be used to illustrate recent commercially successful (and unsuccessful) ventures, and the associated characteristics for success. **Prerequisite(s):** Graduate standing in MAS ILS program.