



**POLITECNICO
DI TORINO**
Dipartimento di Ingegneria
dell'Ambiente, del Territorio
e delle Infrastrutture

SCELSE
Singapore Centre for Environmental Life Sciences Engineering

BIOFILMS

Fundamental and applications

LECTURER: Dr Enrico MARSILI
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**1 — 2
February 2018**

**Laboratorio Rocce
DIATI - Ingresso 3
Politecnico di Torino**

Biofilms are microstructured microbial communities living at interfaces. Often described as “Friends or foe”, biofilms play a key role in modern environmental biotechnologies, such as wastewater treatment and bioremediation. At the same time, biofilms promote material degradation and are reservoirs of antimicrobial resistance. This short course serves as introduction to biofilm research and applications.

DAY	TIME	ACTIVITY
1 FEB	9.00 - 10.00	Introduction to Microbiology [Lecture]
	10.00 - 11.00	Biofilms – Living at the interface [Lecture]
	11.00 - 11.20	BREAK
	11.20 - 12.20	Biofilm electrochemistry [hands-on session]
	12.20 - 13.20	Electrochemical methods [lecture]
	13.20 - 14.00	LUNCH
	14.00 - 15.00	ElectroMicrobiology [Lecture]
	15.00 - 16.00	Methods for biofilms characterization [Lecture]
	16.00 - 16.20	BREAK
	16.20 - 17.20	Applications – Biogeochemistry and Bioremediation [Lecture]
	17.20 - 17.30	DISCUSSION
2 FEB	9.00 - 10.00	Applications – Wastewater treatment and Microbial corrosion [Lecture]
	10.00 - 11.00	Application – Microbial Fuel Cells and Medical Biofilms [Lecture]
	11.00 - 11.20	BREAK
	11.20 - 12.30	Electrochemical data analysis [hands-on session]
	12.30 - 13.00	DISCUSSION AND WRAP - UP

All lectures are 50 + 10 minutes Q&A

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Academic Host:

Prof Rajandrea Sethi (DIATI)

Registrations (up to 15 participants) are open through the online form: <http://bit.ly/biofilms-diatl2018>