

# POSTGRADUATE CERTIFICATE IN INDUSTRIAL BIOTECHNOLOGY AND BIOMANUFACTURING

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Code	Title	Credits
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Students complete modules to the value of **30** credits from the following:

## *Core Modules*

MB6004	Advanced Molecular Microbial Biotechnology	5
MB6015	Microbial Strain Engineering	5
MB6016	Microbial Physiology in Bioreactors	5
MB6017	Biorefinery concepts for the bio-based economy	5
PE6037	Experimental Design and Data Analysis for Bioprocessing	5
PE6038	Industrial Bioprocessing Systems	5
PE6039	Manufacturing Excellence in the Bioprocessing Industries	5
PE6042	Sustainable Biochemical Engineering	5
PE6040	Engineering principles and operation of microbial bioprocesses	10
PE6041	Bioprocess Design Studio	10