

Supplementary Materials

Table S1. Pairwise comparisons between the 18 Imperial College master's programmes' LOs total performance on the eight sustainability attributes. The table reports their positive or zero dominance scores (in each pairwise comparison all sustainability attributes scores are compared one by one and their difference is either +, - or 0, this is summed for all criteria and reported here).

Pairwise comparison	MSc Environmental Technology	MRes Ecosystems and Environmental Change	MSc Advanced materials for Sustainable	MSc Climate Change, Management and Finance	MSc Ecology, Evolution and Conservation	MSc Environmental Engineering	MSc International Health Management	MSc Sustainable Energy Futures	MRes Bioengineering	Mres Green Chemistry	MSc Advanced Chemical Engineering	MSc Advanced Computing	MSc Applied Mathematics	MSc Clinical Research	MSc Finance and Accounting	MSc Optics and Photonics	MSc Petroleum Engineering	MSc Science Communication	
MSc Environmental Technology	0	5	7	6	5	6	5	5	6	7	6	6	7	4	5	8	6	6	100
MRes Ecosystems and Environmental Change	3	0	5	3	3	4	5	4	5	4	5	6	7	3	4	7	4	3	75
MSc Advanced materials for Sustainable Infrastructure	1	2	0	3	3	4	4	2	5	2	4	4	5	3	3	5	4	2	56
MSc Climate Change, Management and Finance	2	4	3	0	3	3	3	3	4	3	4	3	5	3	3	5	4	3	58
MSc Ecology, Evolution and Conservation	3	4	4	4	0	5	4	3	5	5	5	6	7	4	4	6	4	4	77
MSc Environmental Engineering	2	3	3	4	2	0	4	4	5	4	7	7	7	3	4	7	5	4	75
MSc International Health Management	3	3	3	4	4	4	0	3	5	4	5	5	5	4	5	6	5	4	72
MSc Sustainable Energy Futures	3	4	5	4	5	4	4	0	4	5	5	4	5	4	5	7	5	4	77
MRes Bioengineering	2	3	3	4	3	2	3	4	0	3	4	5	6	1	3	5	3	4	58
Mres Green Chemistry	1	3	5	4	2	3	4	3	5	0	4	3	6	3	4	7	4	2	63
MSc Advanced Chemical Engineering	2	2	3	3	2	0	3	3	4	3	0	6	7	2	3	7	4	3	57
MSc Advanced Computing	2	1	3	4	1	0	3	4	2	4	1	0	5	3	3	5	2	3	46
MSc Applied Mathematics	1	1	2	2	1	1	2	2	1	2	1	2	0	1	3	5	1	2	30
MSc Clinical Research	4	5	5	5	4	5	4	4	7	5	6	5	7	0	5	8	6	5	90
MSc Finance and Accounting	3	3	4	4	3	3	3	3	4	3	4	3	4	3	0	4	4	3	58
MSc Optics and Photonics	0	0	1	1	1	0	1	0	2	0	0	0	1	0	2	0	0	1	10
MSc Petroleum Engineering	2	3	3	3	3	2	3	3	4	3	3	4	6	2	2	6	0	3	55
MSc Science Communication	2	4	4	3	3	3	3	3	4	5	4	4	5	3	3	5	4	0	62

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Table S2. Pairwise comparisons between the 40 environment and sustainability related master’s programmes’ LOs total performance on the eight sustainability attributes. For specific courses details please refer to Table 4 in 2.2 Application.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Score	
1	0	2	3	5	4	2	2	3	1	3	3	2	5	3	4	3	4	2	2	2	2	3	5	4	1	2	1	3	2	1	4	4	4	3	3	3	5	3	3	5	116	
2	6	0	4	4	3	3	2	4	4	3	4	3	4	2	4	4	3	2	2	1	2	3	4	3	3	2	1	6	3	2	4	4	3	3	3	4	4	2	4	4	126	
3	3	4	0	5	4	3	2	5	3	2	5	4	5	3	4	3	4	4	2	2	3	4	6	3	4	4	2	5	4	1	5	6	3	3	5	5	5	4	5	5	149	
4	3	4	2	0	2	2	2	5	1	2	2	4	4	2	4	3	2	3	2	3	1	4	4	2	3	3	2	5	4	1	5	3	1	2	4	4	2	4	4	3	113	
5	4	5	4	4	0	4	2	5	2	3	5	4	4	3	5	5	4	4	2	3	3	5	5	3	4	4	3	6	4	2	6	5	3	2	5	5	4	5	5	4	155	
6	6	5	3	5	3	0	3	6	3	2	4	6	5	5	7	5	5	5	5	3	4	5	6	4	5	5	4	8	4	2	7	6	3	4	5	7	5	5	5	5	185	
7	6	6	5	6	5	4	0	6	7	6	5	4	6	6	6	5	6	5	5	5	6	5	8	4	5	6	5	7	5	5	6	7	7	5	5	7	6	6	6	4	219	
8	5	4	3	3	2	2	2	0	3	2	3	2	5	1	4	3	3	3	1	2	3	4	6	4	3	5	3	6	4	1	5	5	3	3	4	5	5	4	4	3	133	
9	6	4	5	7	6	5	1	5	0	5	6	5	5	4	6	6	5	3	4	3	5	5	6	4	4	4	3	5	4	4	5	5	6	3	4	5	6	6	6	4	185	
10	5	5	6	6	5	6	2	6	3	0	5	5	5	4	5	5	5	3	3	3	3	7	5	3	4	4	3	7	5	3	6	6	5	3	6	6	6	5	6	5	185	
11	5	4	3	5	2	4	3	5	2	2	0	3	5	4	5	4	3	5	2	3	2	5	5	3	4	5	5	3	7	5	1	7	5	3	3	6	6	5	4	6	5	159
12	6	5	4	4	4	2	4	6	3	3	5	0	5	3	5	4	4	3	2	2	3	5	6	4	5	5	3	8	4	1	8	6	3	3	5	7	6	4	4	5	169	
13	3	3	3	3	3	3	2	3	3	3	3	3	0	2	3	3	2	3	3	2	3	3	4	3	3	3	3	3	3	3	3	3	3	2	3	3	2	3	2	111		
14	5	6	5	5	4	3	2	7	4	4	4	5	5	0	5	5	3	4	3	3	3	5	5	3	4	5	3	6	5	4	7	5	4	2	5	5	5	5	4	4	171	
15	4	4	4	3	2	1	2	4	2	3	2	3	4	2	0	3	3	3	1	1	1	3	3	2	3	4	2	4	4	2	5	3	3	2	3	3	3	3	2	3	109	
16	5	4	5	5	3	3	3	5	2	2	4	4	5	3	5	0	5	3	3	3	2	4	6	2	3	3	3	6	3	2	6	5	5	3	5	6	5	6	6	4	157	
17	4	4	4	4	2	3	2	5	3	3	4	4	4	4	4	3	0	2	3	1	2	4	3	2	3	4	2	5	4	3	5	3	3	3	4	4	3	4	5	4	133	
18	6	6	4	5	4	3	3	5	5	5	3	5	5	4	5	5	6	0	3	3	3	6	6	3	4	4	3	7	5	2	6	6	5	4	5	7	6	5	6	5	183	
19	6	6	6	5	5	3	3	7	4	5	6	5	4	4	6	5	4	5	0	4	4	5	5	4	5	6	4	7	6	4	7	5	5	3	5	6	6	5	5	4	194	
20	6	7	6	5	5	5	3	6	5	4	5	6	6	5	7	5	7	5	4	0	5	7	4	4	5	6	4	8	6	5	6	6	5	4	7	7	5	6	8	6	216	
21	6	6	5	6	4	4	2	5	3	5	6	5	4	4	6	6	5	5	3	3	0	6	5	3	4	5	3	6	6	4	5	5	5	2	5	5	4	5	6	4	181	
22	5	5	4	4	3	3	3	4	3	1	3	3	5	3	5	4	4	2	3	1	2	0	5	4	3	4	3	6	3	2	4	4	2	3	6	7	4	4	6	5	145	
23	3	4	2	2	1	2	0	2	1	3	2	2	3	2	4	2	3	2	2	4	2	3	0	1	1	2	1	4	2	2	2	3	3	2	4	3	2	4	5	2	94	
24	4	5	5	5	4	4	4	4	4	5	5	4	4	4	5	6	5	5	3	4	4	4	6	0	5	5	4	6	5	4	5	5	5	4	6	5	4	5	5	5	181	
25	7	5	4	5	3	3	2	5	4	4	4	3	5	4	5	5	5	4	3	3	4	5	7	3	0	5	3	7	5	2	6	6	4	4	5	6	6	4	6	5	176	
26	6	6	4	5	4	3	2	3	4	4	3	3	5	3	4	5	4	4	2	2	3	4	6	3	3	0	1	8	3	2	4	6	3	3	4	6	5	4	5	5	154	
27	7	6	6	6	5	4	3	5	5	5	5	5	5	5	6	5	6	5	4	4	5	5	7	4	5	7	0	8	6	3	5	6	6	4	6	6	5	5	5	5	205	
28	5	2	3	3	2	0	1	2	3	1	1	0	5	2	4	2	3	1	1	0	2	1	4	2	1	0	0	0	0	0	2	3	2	2	3	4	4	2	4	4	81	
29	6	5	4	4	4	4	3	4	3	3	3	4	5	3	4	5	4	3	2	2	2	5	6	3	3	5	2	8	0	1	7	5	3	3	5	7	5	4	4	5	158	
30	6	6	6	7	6	6	3	7	4	5	7	7	5	4	6	6	5	6	4	3	4	6	6	4	6	6	5	8	7	0	8	8	5	4	5	7	6	5	6	5	220	
31	4	4	3	3	2	1	2	3	3	2	1	0	5	1	3	2	3	2	1	2	3	3	5	3	2	4	3	6	1	0	0	4	3	3	3	5	4	3	3	4	109	
32	4	4	2	5	3	2	1	3	3	2	3	2	5	3	5	3	5	2	3	2	3	4	5	3	2	2	2	5	3	0	4	0	2	4	4	6	5	5	5	2	128	
33	4	5	5	5	3	5	1	5	2	3	4	5	4	3	4	3	3	3	2	3	2	6	3	2	4	5	2	6	5	3	5	6	0	2	5	5	4	6	6	4	153	
34	5	5	5	5	5	4	3	5	5	5	5	5	5	5	5	5	4	4	4	4	5	5	5	3	4	5	4	6	5	4	5	4	5	0	5	4	5	5	4	3	179	
35	5	4	3	4	3	3	3	4	4	2	2	3	4	3	5	3	3	3	3	1	3	2	4	2	3	4	2	5	3	3	5	4	3	3	0	5	3	3	4	4	130	
36	5	3	3	3	2	1	1	3	3	2	2	1	3	2	4	2	2	1	1	1	2	1	4	2	1	2	2	4	1	1	3	2	2	3	2	0	3	3	4	2	89	
37	3	3	3	4	2	3	2	3	2	2	2	2	3	2	4	3	2	2	1	3	3	4	4	3	2	3	3	4	3	2	4	3	2	2	4	3	0	3	3	3	109	

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38	5	5	4	4	3	3	2	4	2	3	4	4	5	3	5	2	3	3	3	2	3	4	4	3	4	4	3	6	3	3	5	3	2	3	4	4	4	0	5	3	139
39	5	2	3	4	3	3	2	4	2	2	2	4	4	4	6	2	2	2	3	0	2	2	3	3	2	3	3	4	4	2	5	3	2	4	3	3	4	2	0	4	117
40	3	4	3	4	3	3	4	5	4	3	3	3	5	3	4	4	3	3	3	2	3	3	5	2	3	3	3	4	3	3	4	6	3	4	4	5	4	5	4	0	140

1. MSc Design Engineering with Sustainability STR; 2. MSc Ecology and Environmental Management LVH; 3. MSc Environmental Engineering CRN; 4. MSc Environmental Engineering NWC; 5. MSc Environmental Management BRN; 6. MSc Environmental Management RDN; 7. MSt Sustainability Leadership CAM; 8. MSc Sustainability STM; 9.MSc Water Sanitation and Health Engineering LDS; 10.MSc Environmental Economics and Environmental Management YRK; 11.Master in Environmental Sciences ETH; 12.Master in Environmental Sciences WGU; 13.Master in Environmental Sciences and Engineering EPFL; 14. MSc in Environmental Studies and Sustainability Science LUN; 15. MPhil in Environmental Policy CAM; 16. MSc Environment and Development LAN; 17. MSc Environment and Sustainable Development UCL; 18. MSc Environmental Technology ICL; 19. MSc in Environmental Change and Management OXF; 20. MSc in Environmental Science, Policy and Management MESPOM; 21. MSc Environmental Strategy SUR; 22. MSc Environmental Sciences LIV; 23. MSc Environmental and Natural Resource Economics BGM; 24. MSc Environmental Economics and Climate Change LSE; 25.MSc Environmental Engineering UBA; 26. MSc Environmental Governance MAN; 27. MSc Environmental Leadership and Management NTG; 28. MSc Environmental Monitoring Research and Management LBR; 29. MSc Environmental Policy and Management BRS; 30. MSc Environmental Sustainability EDB; 31. MSc Integrated Environmental Studies STM; 32. MSc Mining Environmental Management EXT; 33. MSc Sustainability Planning and Environmental Policy CDF; 34. MSc Sustainable Development SAN; 35. MRes Ecosystems and Environmental Change ICL; 36. MSc Advanced materials for Sustainable Infrastructure ICL; 37. MSc Climate Change, Management and Finance ICL; 38. MSc Ecology, Evolution and Conservation ICL; 39. MSc Environmental Engineering ICL; 40. MSc Sustainable Energy Futures ICL.

Interpretation of Table 5 results

Analysing Table 5 results shows that coverage of the SOS is high for all programmes except for MPhil in Environmental Policy CAM, MSc Design Engineering with Sustainability STR and MSc Sustainable Development SAN. All analyses were done using equal weights for all sustainability attributes. JOS shows lower coverage than SOS and sustainability oriented programmes as well as health and environmental engineering and management programmes are on the high end of coverage. MSc Environment and Sustainable Development UCL shows the highest coverage, while MSc Environmental Economics and Climate Change LSE shows no coverage at all. Six masters programmes around ecology, economics, engineering and applied science with elements of sustainability show the least coverage for JOS. All programmes show coverage of RSB which was expected, however MSc Environmental and Natural Resource Economics BGM and Master in Environmental Sciences and Engineering EPFL show the lowest coverage. For AEM most programmes show low coverage and the Masters related with ecology, environmental science or policy or governance and management or engineering show least coverage. HW shows the second lowest coverage among all attributes. Actually, eight master's programmes show very low no coverage at all, rendering it the most underrepresented attribute. COL attribute is covered by most programmes, however, contrary to expectation six programmes show no coverage at all. Regarding DI, it shows the least coverage out of the eight sustainability attributes examined with 13 programmes showing no coverage at all. Those programmes are related with Environmental Studies, Sciences and Management, Climate Change and economics and a few with Sustainable Development. Lastly, TG is covered by most programmes however coverage is low. Programmes related with environmental engineering/studies and sustainability show least coverage and the Master in Environmental Sciences and Engineering EPFL shows no coverage at all.

Our hypothesis is supported as all courses that have a strong environmental dimension show higher coverage of SOS, courses that have to do with finance and economics as well as engineering show higher coverage of AEM and courses that are related with health management/engineering and sanitation show higher coverage of HW. For JOS since no specifically socially-oriented courses were examined, the coverage is higher in sustainability and engineering courses. For RSB coverage is high for all courses as expected, however COL, TG and DI coverage is found lower than hypothesised. As general recommendation, environment and sustainability oriented courses should consider the gaps in AEM, COL, HW, TG and DI discussed in this study and redevelop their learning objectives.