

Appendix 1- Table of Constructive Alignment

No	Lesson	Learning Outcome	Teaching Method	Assessment Method
1	Data Processing	Primary: 2 Also contributing to: 5, 6,	Teacher's presentation on maritime data processing. Case studies on non-maritime data processing in industries. Discussion of lessons learnt. Solution provider presentations on the basics of existing data processing systems.	The Assessment should be based on real maritime cases. The aim is to bring all participants to a similar level in mastering basic statistical methods. A case like in Appendix 2 on bunker fuel may be used to discuss interactively the value of statistical tools in practice.
2	Calculation and documentation of emissions	Primary: 1 Also contributing to: 6	Discussion of data sets. Presentation of students of data they have used and dealt with. Teacher's presentation on the basics of emission data, regulation and collection systems. Solution provider presentations on the basics of existing KPI systems.	Teachers should use real-life data like those provided in the database THETIS by EMSA. Participants should use such data to have immediate illustration of the concepts discussed.
3	Vessel performance management systems	Primary: 3, 12 Also contributing to: 8	Case Studies on VPMS. Solution provider presentations on the basics of existing VPMS systems. Student presentations on systems they have experienced.	The Assessment should be based on real maritime cases. The aim is to bring all participants to a similar level in mastering basic statistical methods.

			Discussion of the systems presented.	A case like in Appendix 2 on bunker fuel may be used to discuss interactively the value of statistical tools in practice.
4	The role, design and validation of Key Performance Indicators (KPIs)	Primary: 11 Also contributing to: 7, 10	Teacher's presentation on the basics of KPI's and their application. Case Studies on KPI application. Solution provider presentations on the basics of existing KPI systems.	The Assessment should be based on real maritime cases. The data used continuously can now be used to apply in comparison to KPIs as suggested by BIMCO or other systems.
5	The development of regulation and political structures in the maritime industry	Primary: 4 Also contributing to: 9, 13	Teacher's presentation on the basics of maritime regulation. Case Studies on application of regulation. Presentations by regulators, lobbyist and industry interests of a variety of angles towards regulation.	Participants should be given the task to write a proposal / recommendation or similar text to be used in IMO or other bodies.