ACTION PLAN

CESTEC is the joint effort from all expertise to make the BST education more relevant for students, industry and society and actively share best practice. The Centre takes on the task of to equip our teachers with new tools to improve the attainment of learning goals based on scientific approaches to gauge what students actually are learning. The following outline a plan for actions, milestones and deliverables.

Work package (WP) 1: Coordination and organization

A1: Establish CESTEC organization

A2: Establish centre infrastructure in Allégaten 41.

A3: Daily management of CESTEC activities, monitoring of progress and reporting.

A4: Appoint an international Advisory Board for CESTEC, with representatives from higher education in science and pedagogy and relevant external partners.
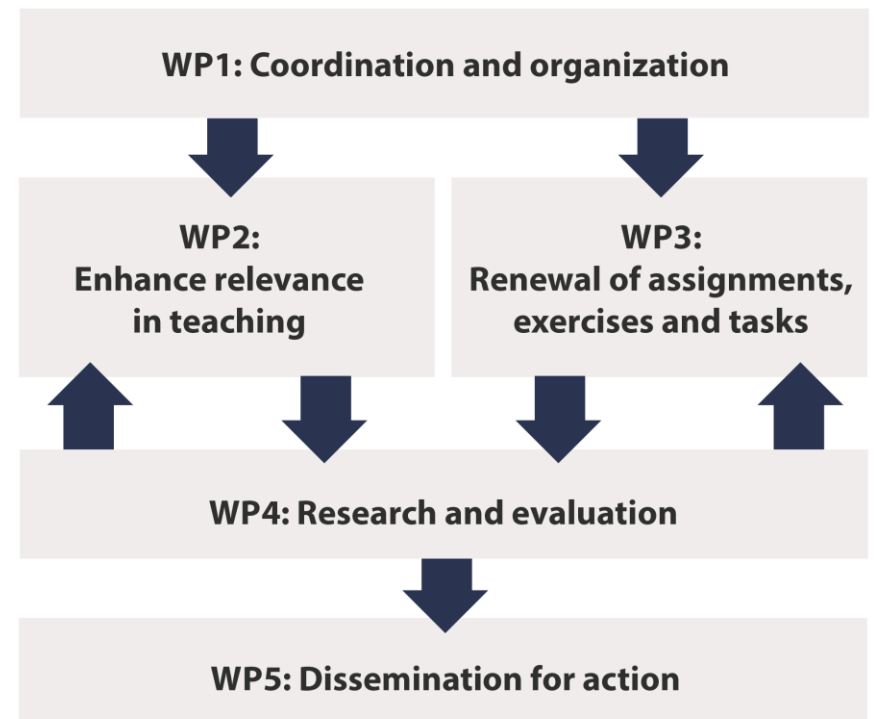
A5: Facilitate lab-space and guidance for students to develop their own ideas.

A6: Create stronger bonds to research institutes, industry and public sector to identify and highlight present challenges in society at large and use these actively in teaching and problem solving.

A7: Active recruitment of new partners in industry and enterprises and partner-contact maintenance.

A8: Appoint Adjunct Professors for educational development within innovation, creativity and communication

A9: Develop an online newsletter for outreach and information.

WP1: Coordination and organization

WP2: Enhance relevance in teaching

WP3: Renewal of assignments, exercises and tasks

WP4: Research and evaluation

WP5: Dissemination for action

WP2 – Enhance relevance in teaching

A10: Develop a culture among the teaching staff of shared responsibility for students, courses, and programs.

A11: Promote awareness among the teaching staff about the importance of demonstrating industrial/societal relevance in regular courses.

A12: Provide up-to-date examples from the industry tailored to the students' competence levels.

A13: Emphasize stronger interaction between theory and practical experiments and demonstrations.

A14: Establish a vibrant guest-lecture program.

A15: Establish fora stimulating a more interactive lecturing practice

WP 4: Research and evaluation

A25: Evaluate the learning outcome of the new teaching activities.

A26: Evaluate the effects of new communication elements in education on the quality of students' written and oral communication skills.

A27: Evaluate the program for internship and Student Accel Program.

WP3 Renewal of assignments, exercises and tasks

A16: Develop new assignments and exercises at all levels to apply basic knowledge to real problems.

A17: Facilitate collaboration with industrial and public enterprises.

A18: Establish internships for students to experience authentic problem solving.

A18: Stimulate participation in collaborative and creative reasoning.

A19: Enhance the focus on problem solving in laboratory courses.

A20: Create physical, social, and virtual fora for sharing experiences jointly with external partners.

A20: Establish a Student Accel Program for innovation and entrepreneurial students in collaboration with Bergen University College and BTO.

A21: Prepare for and practice oral communication to various audiences as an integral part of the learning process.

A22: Improve the students' writing skills by practicing writing to various recipients as an integral part of the learning process.

A23: Include a popular-scientific publication/presentation as part of the study program.

A24: Raise awareness of the importance of communication as a driving force for collaborative creativity.

WP5: Dissemination for action

A28: Organize internal seminars like teacher forums for exchange of experience and best practice among colleagues.

A29: Organize an annual stake-holders' conference for sharing knowledge and outcome of educational research.

A30: Share the outcome of best-practice research and student's experiences with new teaching methodic with all stakeholders in regular online newsletters.

A31: Establish and make available an open-access database of industry-relevant examples and related communication strategies for others to apply in own education programs in BST and other disciplines.

A32: Promote and facilitate teachers exchange to bring ideas and experience to universities in Norway and abroad.

A33: Publish results from educational research in appropriate publishing channels.

Action	Progress	17 ii	17 iii	17 iiii	18 i	18 ii	18 iii	18 iiii	19 i	19 ii	19 iii	19 iiii	20 i	20 ii	20 iii	20 iiii	21 i	21 ii	21 iii	21 iiii	MILESTONES (M)	DELIVERABLES (D)
Work package (WP) 1: Coordination and organization																						
A1	Establish organization and structures	M																			Head office in place	
A2	Establish centre in Allégaten 41			MD																	Centre opening	Centre fully operational
A3	Daily management, monitoring and reporting	M		D				D				D				D				D	Routines in place	Annual reports to NOKUT
A4	Appoint an international Advisory Board	M	D				D				D										Appoint members - meetings	Annual Advisory-Board report
A5	Find and facilitate student lab-space		M		M																locate, opening	
A6	Strengthening of educational bonds toward enterprises	M																			Agreements with major collaborators	
A7	Active recruitment of new partners, partner-contact maintenance			MD				D	M		D					D				D	Identify partners and partner meetings	Recruitement rate: 5 new per year
A8	Adjunct Professors for educational development			M																	Adjunct Professors appointed	Reports on professor contributions and activities in A3 and A4
A9	Develop an online newsletter			M	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	Regular newsletter active	Newsletter published
WP2 – Enhance relevance in teaching																						
A10	Cultural shift among the teaching staff			M																D	Motivation plan for cultural shift	Report of outcome
A11	Promote awareness of industrial/societal relevance in regular courses			M																	Plan for promoting awareness	
A12	Provide up-to-date examples from industry				M	D				D				D				D			Plan for collecting and implementing ex.	delivered in data base
A13	Stronger interaction between examples and theory					D				D				D				D			A12	A12
A14	Establish a vibrant guest-lecture program	M	D		M	D	D		M	D	D		M	D	D		M	D			Identify and plan guest lecturers	
A15	Fora stimulating a more interactive lecturing practice			D						D				D				D			A30	report
WP3 Renewal of assignments, exercises and tasks																						
A16	Develop new assignments and exercises					M		D		D		D									Plan new assignment/exercise scheme	Test in selected courses
A17	Establish internship options					M					D				D						Agreements signed	
A18	Participation in collaborative and creative reasoning			M							D									D	plan for groups	report on creativity in science
A19	Enhance the focus on problem solving in laboratory exercises								M	D		D		D							Plan for "open-end" lab. exercises	Test in selected lab. courses
A20	Student Accel Program for innovation (Bergen Univ. College and BTO)				M					D				D				D			Develop Accel Program Activities	Implement in study programs
A21	Prepare and practice oral communication			M			D									D					Implementation strategy	evaluation
A22	Prepare written assignments for various recipients			M			D									D					Identify test course	
A23	Popular-scientific publication/presentation			M	D					D				D			D				Plans implemented	In-house student conference
A24	Communication as a driving force for collaborative creativity	M			D					D				D							initiate lectures and workshops	workshops
WP4: Research and evaluation																						
A25	Evaluate the learning outcome of the new activities				M											D					Inititate PhD reserach program	PhD defence/dissertation
A26	Evaluate the effects of new communication elements				M											D					Inititate PhD reserach program	PhD defence/dissertation
A27	Evaluate the program for internship and Student Accel Program				M						D				D			D			Inititate collaboration project	Annual evaluation and presentation at stakeholders conference (A30)
WP5: Dissemination for action																						
A28	Organize internal seminars/teacher forums			M	D		D			D				D				D			Teachers seminars initiated	Bi-annual teachers' seminars
A29	Organize an annual stake-holders' conference				M		D				D				D					D	Stakeholders conferences initiated	Annual stakeholders' conference
A30	Share best practice in regular online newsletters				D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	Newletter established in A9	Newletters published regularly
A31	Open access database for industry-relevant examples					M	D														Identify platform, construct user interface	Publish the database, continous maintenance
A32	Promote and facilitate teacher exchange	M	D				D				D				D						Recognizion of sabbathical scheme	Promote incoming/outgoing teacher exchange
A33	Publish in appropriate publishing channels									D		D		D		D		D			Monitoring established in A3	Published papers