

Course Program

Time	Monday <i>22. October</i>	Tuesday <i>23. October</i>	Wednesday <i>24. October</i>	Thursday <i>25. October</i>	Friday <i>26. October</i>
09:00 – 09:30	Welcome and introduction to (DT, HATH, AN): <ul style="list-style-type: none"> • BSU • Teachers • Course participants • Practicals 	TOPIC2.1: Hydrology in the catchment. (HATH) <ul style="list-style-type: none"> • Introduction, motivation and aims. 	TOPIC3.1: Nutrients in the catchment. (DT) <ul style="list-style-type: none"> • Introduction, motivation and aims. 	TOPIC 4.1: SWAT – from scratch to successful simulation (AN, HATH, DT): <ul style="list-style-type: none"> • Info on access to required input data Hands-on exercise:	TOPIC 5.1: SWAT–CUP. (HATH, DT, AN) <ul style="list-style-type: none"> • Introduction to calibration and validation procedures Hands-on exercise:
09:30 – 10:00	TOPIC 1.1: Introduction (DT) <ul style="list-style-type: none"> • Challenges with water, food and nutrients in the world and Tanzania • Catchment modeling as a management tool. • Motivation and aim of the course 	TOPIC2.2: Hydrology in the catchment. (HATH) <ul style="list-style-type: none"> • Processes and effects. 	TOPIC3.2: Nutrients in the catchment. (DT) <ul style="list-style-type: none"> • Processes and effects. 	<ul style="list-style-type: none"> • Setting up SWAT model, running model and visualizing output • Possibility to work on course participants own projects 	<ul style="list-style-type: none"> • Running a SWAT-CUP simulation based on case study set up (prepared) • Possibility to work on course participants own projects
10:30 – 11:00	Coffee break	Coffee break	Coffee break	Coffee break	Coffee break
11:00 – 11:30	TOPIC1.2: Simulation techniques (Reuben) <ul style="list-style-type: none"> • background of simulation techniques, its potential applications and basic terminologies 	TOPIC2.2: <i>(continued)</i>	TOPIC3.2: <i>(continued)</i>	TOPIC 4.1: <i>(continued)</i>	TOPIC 5.2: Catch up and questions.
11:30 – 12:00	TOPIC1.3: Hydrology and Nutrient intro (HATH, DT) <ul style="list-style-type: none"> • Short intro to basic hydrology in a catchment • Short intro to nutrient cycling in a catchment 				
12:00 – 13:30	Lunch	Lunch	Lunch	Lunch	End of the course
13:30 – 14:00	TOPIC1.4: Eco-hydrological modelling (HATH) <ul style="list-style-type: none"> • Introduction to catchment modeling – as a tool for managers and scientists 	TOPIC2.3: Case story SWAT application. (AN, HATH, DT) Hands-on exercise: <ul style="list-style-type: none"> • Climatic impacts on hydrology. • Management impacts on hydrology. • Climatic impacts on crop yields. 	TOPIC3.3: Case story SWAT application. (AN, DT, HATH) Hands-on exercise: <ul style="list-style-type: none"> • Nutrients export responses to management • Effects of nutrients on crop yield and receiving waters. • Effects of nutrients on receiving waters (empirical models). • Climatic impacts on nutrient export. 	TOPIC 4.1: <i>(continued)</i>	
14:00 – 14:30	TOPIC1.5: Model case study (AN) <ul style="list-style-type: none"> • Introduction to a SWAT application (which will be used in hands-on exercises). 				
14:30 – 15:00	Coffee break	Coffee break	Coffee break	Coffee break	
15:30 – 17:30 <small>(coffee breaks when needed)</small>	TOPIC1.6: SWAT example (AN, HATH, DT) <ul style="list-style-type: none"> • SWAT at first glance (introduction to menu-structure and basics). Hands-on exercise: <ul style="list-style-type: none"> • Running a SWAT simulation and visualizing output 	TOPIC2.3: <i>(continued)</i>	TOPIC3.3: <i>(continued)</i>	TOPIC 4.1: <i>(continued)</i>	Black text: presentations and discussions Red text: Hands-on exercises
17:30	End of the day	End of the day	End of the day	Course dinner	