## REEL ANALYSIS I



| 2 | Basic topological properties of $R$, compact and connected sets and their properties |  |  |
| :---: | :---: | :---: | :---: |
| 3 | Sequences and series in R and C , and their properties |  |  |
| 4 | Power series and absolute convergence, addition and multiplicatio of series |  |  |
| 5 | Countinuity and continous functions and their properties |  |  |
| 6 | Differentiation and properties of the differentiable functions |  |  |
| 7 | Mean value theorem and its applications |  |  |
| 8 | Vector-valued functions and their properties |  |  |
| 9 | The Riemann-Stieltjes integral and its properties |  |  |
| 10 | Integration of vector-valued functions |  |  |
| 11 | Sequences and series of functions and their properties, uniform convergence, The StoneWeierstrass theorem, some special functions |  |  |
| 12 | Uniform convergence of sequences and series of functions |  |  |
| 13 | The Stone-Weierstrass theorem and its applications |  |  |
| 14 | Some special functions, the exponential and the logarithmic functions, the trigonometric functions, Fourier series, the Gamma function and their properties |  |  |
| 22 | Textbooks, References and/or Other Materials: |  |  |
| 23 | Assesment |  |  |
| TERM LEARNING ACTIVITIES |  | $\begin{array}{\|l\|} \hline \text { NUMB } \\ \text { R } \end{array}$ | WEIGHT |
| Midterm Exam |  | 0 | 0.00 |
| Quiz |  | 0 | 0.00 |
| Homeworks, Performances |  | 0 | 0.00 |
| Final Exam |  | 1 | 100.00 |
| Total |  | 1 | 100.00 |
| Contribution of Term (Year) Learning Activities to Success Grade |  |  | 0.00 |
| Contribution of Final Exam to Success Grade |  |  | 100.00 |
| Total |  |  | 100.00 |
| Measurement and Evaluation Techniques Used in the Course |  |  |  |
| 24 | ECTS / WORK LOAD TABLE |  |  |

\(\left.\begin{array}{|l|l|l|l|}\hline Activites \& Number \& Duration (hour) <br>
Total Work <br>

Load (hour)\end{array}\right]:\)| 42.00 |
| :--- |
| Theoretical |
| Practicals/Labs |
| Self study and preperation |
| Homeworks, Performances |
| Projects |
| Field Studies |
| Midterm exams |
| Others |
| Final Exams |
| Total Work Load |
| Total work load/ 30 hr |
| ECTS Credit of the Course |


| 25 | CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | PQ1 | PQ2 | PQ3 | PQ4 | PQ5 | PQ6 | PQ | PQ8 | PQ9 | $\begin{gathered} \text { PQ1 } \\ 0 \end{gathered}$ | PQ11 | PQ12 | $\begin{array}{\|c} \hline \text { PQ1 } \\ 3 \end{array}$ | PQ14 | PQ15 | PQ16 |
| ÖK1 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK2 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| ӦКЗ | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK6 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK7 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| LO: Learning Objectives PQ: Program Qualifications |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Contrib ution Level: |  | very | ow |  | 2 low |  |  | Mediu | um |  | 4 High |  |  | 5 Very | High |  |

