**TE Project Topics:**

1. Development of a scaffold based approach as skin substitutes that facilitates the treatment of a patient with deep burn.
2. Graphene Oxide based TE approach for spinal cord injury
3. Peripheral nerve injuries -A treatment approach in TE to a type of Peripheral Neuropathy such as small fiber neuropathy
4. Renal failures-Decellularization approach for creating engineered kidney constructs as an alternative to donor organ transplantation.
5. Bioreactors in TE-Bioreactors for Manufacture of Platelets
6. A dermal substitute based on biofunctionalized electrospun polymer
7. Ultrathin hydrogel films for corneal TE- regeneration of corneal endothelium
8. A TE Therapy for a Cardiovascular Disease in the context of blood vessels
9. A TE approach for Periodontal Tissue repair
10. Artificial pancreas
11. Artificial bladder
12. Exosome-loaded TE Products for Cardiac Regenaration
13. Injectable Polymers for Cartilage TE
14. Use of Bioinks in Diabetic Wound Healimg
15. Antibiotic-loaded Polymeric Scaffolds for Wound HEaling
16. Human Amniotic Membrane as a Scaffold for Corneal Damages
17. Induced Pluripotent Stem Cell Based TE Scafolds for Laryngeal Replacement
18. Tympanic Membrane Perforation and Polymer Originated TE Products
19. Lab Grown 3D Intestines for Submucosal Injuries
20. 3D Bioprinting of Kidneys for Treatment of Renal Failure

**For the topics above the followings should be mentioned:**

-what is the disease? (Select a disease)

-what is the scaffold material? (polymer, ceramic, composite) Why you select that material? Which important scaffold properties do you need to consider for your project?

-What is the scaffold preparation technique? Why that technique?

-Scafold characterizaiton methods?

-what is the scaffold sterilization method?

-What is the cell type used?

-What is the cell source?

-What is the biosignal (growing factor)?

-What is the cell culture method? In vitro biocampatibility testing and results? Cell seeding? Culture conditions ? cell viability? cell differantiation?

-what is the cell monitoring method?

-Any clinical study? (if available)

For each Project 3 papers published after 2018 will be studied. (the impact factor of the journal should be higher than 3). The following issues of each paper should be mentioned in the presentation and report :

1. Context of the paper: authors, source, year of publication, journal

2. Topic of the paper -- what subject does it address and what is its objective?

3. what are the important points of the paper?

4. what are the key conclusions of the paper?

5. Why do you think this paper is significant in the field of your project subject?

**To be given :**

A word file of your Project Report-(Including the aim , materials, methods, results, conclusion etc.)

A ppt file of your presentation-max. 20 min talk and 30 slides

2 questions and answers regarding your project studies-should be added at the end of your ppt talk file

A Folder containing the papers and all other searched literature (the 3 papers and other literature)

**Deadline: 15.06.2022**