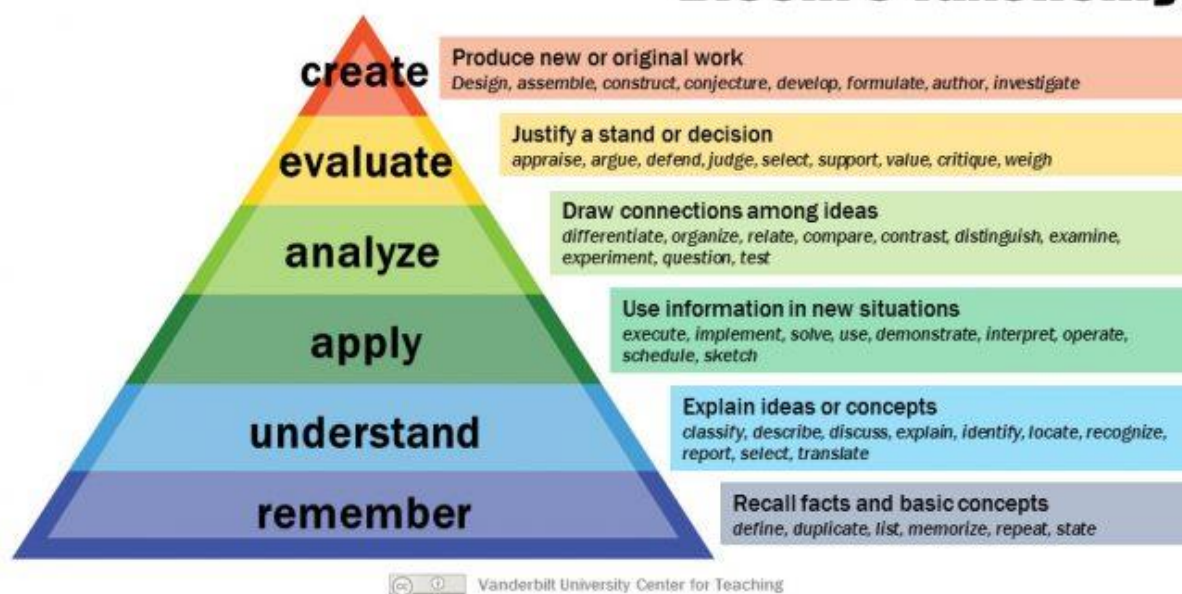# COURSE OUTCOMES

Blooms Theory is based upon the idea that there are levels of observable actions that indicate something is happening in the brain (cognitive activity.) By creating learning objectives using measurable verbs, indicating explicitly what the student must do in order to demonstrate learning.

Remember, Understand, Apply, Analyze, Evaluate, Create

R, U, Ap, Az, E, C

PSO for Life Sciences

1. Graduates will have a comprehensive understanding of the fundamental concepts in life Sciences including chemistry.

2. Students apply scientific principles to design, conduct experiments and analyse data to draw meaningful conclusions.

3. Students will develop employability and Entrepreneur skills by Integrating with philosophical approach across allied sciences.

PSO for MGP

1. Graduates will have a comprehensive understanding of the fundamental concepts in Cell Biology, Molecular Biology, Genetic Engineering and Microbial diversity, Immunology, Computational Biology, Cognitive Psychology and clinical Psychology.

2. **Students can apply Molecular Biology and Bioinformatics to design, conduct experiments and surveys to analyse and interpret data.**
3. **Students will become skilled Genetic Counsellors by integrating Psychology and Genetics or become Clinical Psychologists.**

Department of Genetics

SEMESTER I

Remember, Understand, Apply, Analyze, Evaluate, Create : R, U, Ap, Az, E, C

Title of the Course: Transmission Genetics- I			
Sem-I Credits: 4	**Course Code GEN 101**		**Year/Group: I/MGP HPW: 4**
Course Outcomes			Blooms Level
CO1	To understand Mendelian Laws and inheritance through various crosses		U
CO2	To define and identify the concepts of Linkage, Multifactorial Inheritance		R, U
CO3	To differentiate between the Mendelian and Non- Mendelian Inheritance		Az
CO4	To distinguish between the various stages of Cell division and understand the regulation of Cell cycle including Apoptosis and Senescenceand recognise the Chromosome structure, organization and its variation		Az, U

SEMESTER II

Title of the Course: Molecular Genetics and Genetic Engineering			
Sem-II Credits: 4	Course Code:GEN201	Year/Group: I/MGP HPW: 4	
Course Outcomes			
CO1	To understand and identify the structure of the Nucleic acids, DNA Replication.		U
CO2	To understand the mechanism of DNA repair, and differentiate between Gene expression and Gene Regulation in prokaryotes and Eukaryotes		U, Az
CO3	To describe the properties of vectors and genomic Libraries		U
CO4	To implement the concepts of Molecular Biology and Genetic Engineering		Ap

SEMESTER III

Remember, Understand, Apply, Analyze, Evaluate, Create : R, U, Ap, Az, E, C

<table>
<tr><td colspan="4">Title of the Course: - I</td></tr>
<tr><td>Sem-III</td><td>Credits: 4</td><td>Course Code: GEN301</td><td>Year/Group: II/MGP   HPW: 4</td></tr>
<tr><td colspan="3">Course Outcomes</td><td>Blooms Level</td></tr>
<tr><td>CO1</td><td colspan="2">To understand the graphical methods for representing grouped data</td><td>U</td></tr>
<tr><td>CO2</td><td colspan="2">To differentiate between binary, Arithmetic and logical operations</td><td>Az</td></tr>
<tr><td>CO3</td><td colspan="2">To identify the basics in handling bioinformatics tools</td><td>U</td></tr>
<tr><td>CO4</td><td colspan="2">To implement the Chi-Square, ANOVA and Biological database in research experiments</td><td>Ap</td></tr>
</table>

SEMESTER IV

<table>
<tr><td colspan="4">Title of the Course: Population Genetics</td></tr>
<tr><td>Sem-IV</td><td>Credits: 4</td><td>Course Code:GEN401</td><td>Year/Group: II/MGP   HPW: 4</td></tr>
<tr><td colspan="3">Course Outcomes</td><td></td></tr>
<tr><td>CO1</td><td colspan="2">To understand and identify the structure of population and the concept of Gene pool, deme and panmictic unit</td><td>U</td></tr>
<tr><td>CO2</td><td colspan="2">To understand and explore the extension of the Hardy Weinberg law</td><td>U, Ap</td></tr>
<tr><td>CO3</td><td colspan="2">To understand and differentiate between the effect of Systemic and dispersive forces on the population</td><td>U, Az</td></tr>
<tr><td>CO4</td><td colspan="2">To understand the Genetic Variation , inbreeding and its effect on genotypic frequencies</td><td>U,Az</td></tr>
</table>