<table>
<tr><td>Course Code</td><td colspan="6">FNU3200</td></tr>
<tr><td>Level</td><td colspan="6">03</td></tr>
<tr><td>Course Title</td><td colspan="6">Ethics in Science and Technology</td></tr>
<tr><td>Credit value</td><td colspan="6">02</td></tr>
<tr><td>Core/Optional</td><td colspan="6">Optional</td></tr>
<tr><td>Prerequisites</td><td colspan="6"></td></tr>
<tr><td rowspan="2">Hourly breakdown</td><td colspan="2">Theory</td><td>Practical hours</td><td>Independent Learning</td><td>Assessment</td><td>Total</td></tr>
<tr><td>15 Sessions x 2 = 30 hrs</td><td>4 DS x 2 = 08 hrs</td><td>-</td><td>• 15Sessions x3 =45 h
• independent / group learning for tutorial-10 h
• Recommended readings [10h]
65hrs</td><td>• (2 CATs x 1hr)
• GP(1hr)
3 h</td><td>106 hrs</td></tr>
<tr><td>Course Aim/s</td><td colspan="6">To provide the knowledge on ethics, morals and attitude in general and applications of ethics in trade, research (medical and science) and copy right and patenting the new products.</td></tr>
<tr><td>PLOs addressed by course</td><td colspan="6">PLO1: Knowledge: Explain the fundamental, principles and broader knowledge pertaining to the chosen science disciplines offered for the degree.
PLO3: Communication: Demonstrate the competency in communicating efficiently and effectively to present information, ideas and concepts to the scientific community as well as to the wider society.
PLO4: Individual Work, Team Work and Leadership: Demonstrate the competency in working independently and in groups in addressing issues in multi-disciplinary environments and completing the tasks on time through collaborative learning while exhibiting leadership.
PLO5: Creativity and Problem Solving: Identify and analyze problems using quantitative and/or qualitative approaches using scientific methodology to provide valid conclusions.</td></tr>
<tr><td>Course Learning Outcomes (CLO)</td><td colspan="6">The students should be able to:

CLO1 – Develop the knowledge on the ethics in general(PLO1, 2,)
CLO2: Develop a comprehensive understanding of the ethics in research, trade and copyright.(PLO1)
CLO3: Develop the knowledge copy right and patenting involved in protecting publications and new product development (PLO5)</td></tr>
<tr><td>Content (Main topics, sub topics)</td><td colspan="6">Introduction to the ethics in science and technology
Introduction to ethics – Definition of terms, Philosophy of life – Values, beliefs and attitudes, Moral development, moral problems and moral dilemmas, Basic principles in ethics, History of ethics in science and technology.
Practice of ethics in science and technology
Ethics in practice I – Medical ethics, Ethics in practice II – Ethical conduct in other subjects, Ethics in practice III – Informed consent, Ethical decision making I – Ethical problems, Ethical decision making – Ethical reasoning.
Ethics in intellectual property right
Introduction to the intellectual property law, Copyright law and ethics, Trademarks law and ethics, Trade sevret / undisclosed information law and ethics, Patent law and ethics</td></tr>
<tr><td>Teaching Learning methods (TL)</td><td colspan="6">Self- learning/Independent learning
▪ Instructional Material (IL)
▪ Online Activities(OL)
▪ Reference Work (RE)

Compulsory contact sessions
▪ Group Projects (GP)
▪ Assessments (AS) and Feedback – MCQs (MCQ); Structurer Essay (SEQ), Reports (RE), Non-compulsory contact sessions

Non compulsory
▪ Day Schools (DS)</td></tr>
<tr><td rowspan="2">Assessment strategy</td><td colspan="4">Overall CA Mark (OCAM): 40%</td><td colspan="2">Final Assessment: 60%</td></tr>
<tr><td colspan="4">CAT I (OBT) – 1 hr, CAT II (NBT) - 1 hr, GP-1hr:

50% from best CAT + 20% from the other CAT + 30% from GP (attendance compulsory</td><td colspan="2">Final Evaluation
Theory – 2hrs – 100%</td></tr>
<tr><td>Recommended Readings:</td><td colspan="6">• Dr Raymond E. Spier (2003). Science and Technology Ethics (Professional Ethics) 1st Edition, Kindle Edition. Routledge.

• Koepsell, David (2017). Scientific Integrity and Research Ethics. Springer International Publishing.</td></tr>
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	• Adam Briggle and Carl Mitcham (2012). Ethics and Science an introduction. USA by Cambridge