ANNEX 2 – COURSE DESCRIPTION

Course Title	**Internship**				
Course Code	**AU212**				
Course Type	**Compulsory**				
Level	**BSc (Level 1)**				
Year / Semester	**2thyear / 4th semester**				
Teacher's Name	**Mr. Papamichael Theodoulos**				
ECTS	**5**	Lectures / week	**15 hours/week for a Semester. Total 150 hours**	Laboratories/week	No
Course Purpose	**This course aims to provide students with an opportunity to explore career interests in a work environment of Automotive Engineering, through applying knowledge and skills learned at their undergraduate courses and labs. Specific emphasis is placed in practical skills related with Automotive Engineering Service Station/Workshop tasks and activities. Furthermore, it creates a balance of academic and practical directions within the BSc. in Automotive Engineering programme, capable to prepare them for direct employment as Automotive Engineers.**				
Learning Outcomes	**Acquire hands-on experience related to the Automotive Engineering profession, hence integrate smoothly with the work environment, by:** **1. Reading Service Manuals, Electrical and Mechanical Tools function, Safety Rules that must be obeyed, Service Programs, Inspection Points, Oil Grading and Types of Oils** **2. Getting familiar with diagnosing procedures and how to solve technical problems based on vehicle integrated diagnosis and/or customer complaints.** **3. Assisting a service/spare part manager or a service advisor in the running of the post and developing certain professional skills.** **4. Be able to evaluate sources of error and be able to attack mechanical problems and plan for preventing maintenance.** **5. Communicating with colleagues and customers so to familiarise with the environment of the workplace.** **Upon completion of the placement, students are expected to improve their Automotive engineering skills by i. acquiring further knowledge, ii. advancing their aptitudes and iii. perfecting their communication skills.** **Understand the significance of health and safety regulations and**				

<table>
<tr><td></td><td colspan="3">practices, when they practice the profession they study.
Familiarize themselves with the vocational environment of the Automotive Engineering discipline.
Ability to integrate knowledge from different branches, handle complexity in tasks, understand applicable techniques and methods, their limitations and the non-technical implications of Automotive engineering practice.
Apply their knowledge and understanding for developing practical skills, solving problems, conducting investigations, and assessing/redesigning engineering devices and processes.
Understand the use and limitations of engineering processes, equipment, service station/workshop practice, technical literature and information sources.
Recognise the wider, non-technical implications of Automotive engineering practice, including societal, ethical, environmental, commercial and industrial.</td></tr>
<tr><td>Prerequisites</td><td>None</td><td>Corequisites</td><td>None</td></tr>
<tr><td>Course Content</td><td colspan="3">The students are expected to work in a Service Station/Workshop that operates in the area of Automotive Engineering.
Perform the Automotive Engineering duties, that they will be assigned. Complete a logbook and a calendar of the daily tasks that they perform. Make a record of all the decisions they took and their reasoning. The tasks/activities include:
➢ Check list for serving a Car
- Points for inspection and parts to be replaced
- Intervals for next service/inspection
- Connecting a diagnostic unit on the vehicle
➢ Communication with other engineers
- Inspection for probable faults and warranty recalls
➢ Specification of parts to be used
- Oil grade and quality, spark plug gap, Coolant additives
➢ Record keeping
- Filling in vehicle record history
➢ Updating customer records
Familiarise with Automotive Engineering processes
Communicate with other engineers
Read technical manuals and specifications
Familiarise with software for specific Automotive Engineering applications
Comprehend Design and Automotive Engineering Automation
Acquire Problem Solving Techniques</td></tr>
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	Develop Practical skills **Use equipment and instruments relevant to the tasks they are assigned**
Teaching Methodology	**The course is based on the participation of the students to Automotive Service Station/workshop throughout the semester where he/she will be supervised by an Academic and Service Station/Workshop Supervisor (foreman), with a continuous monitoring of the students.** **Weekly contact of the students with their Academic Supervisor.** **The student must keep a detailed logbook of the learning outcomes that where gained during the semester. Students should complete the logbook using information from the library, and manuals available in the Service Station/workshop. The information in the logbook should be detailed and self-contained.** **Students are assessed continuously, and their acquired knowledge is checked through an oral presentation where they present what they have accomplished.**
Bibliography	**(a) Textbooks:** • **M.J. Nunney , Automotive Technology, SAE International, 3rd Edition, 1998** • **Engineering Your Future: The Non-technical Side of Professional Practice in Engineering and Other Technical Fields, S.G. Walesh, ASCE Press, 2nd edition, 2000, 497 p.** **(b) References:** • **Julian Happian Smith, Introduction to Modern Vehicle Design, SAE International, 2002** • **Paul Nieuwenhuis, Peter Wells, Motor Vehicles in the Environment: Principles and Practice, John Wiley & Sons, 1994.** **Books, technical manuals and journal articles related to the internship/placement engineering field from Frederick University and the archives/library of the Company that the students are placed**
Assessment	• **Technical skills learned (Evaluation by the Service Station/Workshop Supervisor (foreman)) (30%).** • **Logbook (Evaluation of the by the Academic Supervisor) (20%).** • **Professional conduct and assessment, and oral presentation (Evaluation by Academic Supervisor) (50%).**
Language	**English**