



STANDARD OPERATING PROCEDURE FOR SOFTWARE
DEVELOPMENT AND MAINTENANCE

ISSUE HISTORY

Issue No:	Description of Change	Status	Originator	Effective Date
1	Initial release	Approved	ICT Team	March 1, 2022

REFERENCE DOCUMENTS

Document Number	Document Title
ES ISO 9000:2015	Quality Management Systems - Fundamentals & Vocabulary
ES ISO 9001:2015	Quality Management System – Requirements, Clause 7.5

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STANDARD OPERATING PROCEDURE FOR SOFTWARE
DEVELOPMENT AND MAINTENANCE

1. PURPOSE

The purpose of this procedure is to define the methods of how software can be developed and maintained.

2. SCOPE

This procedure is applicable to all software development and maintenance process in the University.

3. PROCESS OWNER

ICT Executive Officer, ICT Team Leaders

4. DEFINITIONS AND ABBREVIATIONS

4.1 DEFINITIONS

4.2 ABBREVIATIONS

UPR	University President
PO	President Office
AASTU	Addis Ababa Science and Technology University
FLW	Flow Chart
ISO	International Organization for Standardization
SDLC	System Development Life Cycle
IQA	Institutional Quality Assurance and Enhancement
ICT	Information and Communications Technology
TL	Team Leader
SOP	Standard Operational Procedure
QM/MR	Quality Manager/Management Representative
QMS	Quality Management System



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STANDARD OPERATING PROCEDURE FOR SOFTWARE
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5. PROCEDURE

5.1. FLOW CHART

Software Development and Maintenance Procedure				
Input	Process Flow	Output	Responsibility	Timeframe
User request or Annual plan	<pre> graph TD A([User request/ Annual plan 1]) --> B{Approved? 2} B -- No --> C([Reject Request 2a]) C --> A B -- Yes --> D[Assign expert 2b] D --> E[Implementing with SDLC 3] E --> F([Developed/ Maintained software 4]) </pre>	Software need	ASTU Community/Team Leader	3 days
Software need		User Request Approved or rejected	ICT Executive Officer, Team Leader	1hr
Approved user request		User request assigned to expert	Team Leader	5 mins
User request assigned to expert		Selected SDLC	Assigned expert	2-3 months
Selected SDLS		Report	Assigned expert	1 hr

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5.2. DESCRIPTION OF PROCESS STEPS

FLW	Process Steps Description
1	Software development request raised by the user will be reviewed
2	Annual plan or request shall be reviewed
2a	Request will be viewed through different scenarios. The main reasons for rejection of request may be the following: <ul style="list-style-type: none"> • When the request cannot be implemented within AASTU. • When the request could be included in existing software. • When the request could be easily handled by user training.
2b	a) Experts will be assigned to develop or maintain the software
3	Appropriate System Development Life Cycle will be executed
4	Developed or maintained software which satisfy all the requirement of the user will be handed over

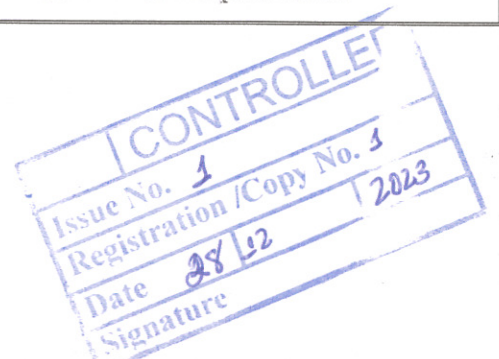
6. RECORDS


The Quality Management Representative has the responsibility to record and retain the following records.

- ICT Policies and Guidelines

7. RELATED DOCUMENTS

Document No.	Document Title
PO/ICT/POL/001	ICT Policies and Guidelines
PO/ICT/OF/005	Software Development and Maintenance Request form



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