

# SOFTWARE REQUIREMENTS SPECIFICATION

04/11/2011

## Hourly Student Appointments

The new Hourly Student Appointment System will fully automate the processing of new positions, changes and terminations of positions for hourly paid MIT students.

Version 2

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## REVISION HISTORY

<b>Name</b>	<b>Date</b>	<b>Reason for Changes</b>	<b>Version</b>
Jyoti Sharma	3/31/2011	<i>Initial Version</i>	1.0
Jyoti Sharma	4/20/2011	<i>Changes after approval</i>	2.0
Jyoti Sharma	06/21/2011	<i>Changes after approval</i>	3.0
Jyoti Sharma	10/18/2011	<i>Changes after approval</i>	4.0
Jyoti Sharma	10/26/2011	<i>Changes after approval</i>	5.0
Jyoti Sharma	12/17/2011	<i>Changes after approval</i>	5.0

## INTRODUCTION

### Purpose

The Software Requirement Specification (SRS) provides the functional and nonfunctional software requirements for the Hourly Student Appointment System. This document is intended to be used by the members of the project team that will implement and verify the correct functioning of the system. Unless otherwise noted, all requirements specified here are high priorities and are necessary for a successful implementation of the project.

### Intended Audience and Reading Suggestions

The SRS is intended for Business Users, Stakeholders, Project Managers, Quality Assurance Analysts, developers and other deployment team members.

- Development team members should read the document in its entirety.
- For anyone who is primarily interested in understanding the features of the system, the Use Case section explains system features in detail.
  - For a quick overview, read either the text of the use cases or the activity diagrams.
  - For an in-depth understanding of the system features, read the use cases in conjunction with the requirements that are referenced at the individual steps of the use case. The requirements descriptions are located in the requirements section at the back of the document.

### Project Scope and Product Features

The Hourly Student Appointment Automation project henceforth referred to as “HSA” will automate the manual processes which are currently carried out by the HR-Payroll Service Center. It will improve the web-based data entry form by reducing the amount of data that needs to be entered by the Student Administrator (SA) when they create UROP positions, or when they change or terminate positions. The system will allow for routing requests for approval and improve monitoring of compliance with MIT policies and United States Citizenship and Immigration Service (USCIS) regulations. Overall, the automation of hourly paid student appointments is expected to streamline the end-to-end business process, provide cost savings, improve customer service, and result in a more satisfied user community.

**In scope:** Create new hourly student positions, change and terminate hourly student positions

**Out of scope:** Cost object changes (except when extending a position), processing of position transactions for students who work at Lincoln Laboratories.

### References

Name	Date	Location	Version
Vision and Scope Document	02/10/2011	<a href="https://wikis.mit.edu/confluence/display/HrlyStdAppts/Vision+and+Scope">https://wikis.mit.edu/confluence/display/HrlyStdAppts/Vision+and+Scope</a>	2.0
Work Hours Rules Matrix	04/05/2011	<a href="https://wikis.mit.edu/confluence/display/HrlyStdAppts/Work+Hours+Rules">https://wikis.mit.edu/confluence/display/HrlyStdAppts/Work+Hours+Rules</a>	1.0

## OPERATING ENVIRONMENT

OE-1: The Hourly Student Appointment system shall operate on MIT supported browsers, on MIT supported platforms (operating systems).

OE-2: Hourly Student Appointment system shall operate in the current MIT SAP environment.

## DESIGN AND IMPLEMENTATION CONSTRAINTS

CO-1: The system's design, code and maintenance documentation shall conform to IS&T's UI design and programming standards.

## USER DOCUMENTATION

UD-1: Training presentation for the user community

UD-2: Training documentation handout.

UD-3: Training documentation handout will be available from the application.

UD-4: Online training video on MITNet.

## ASSUMPTIONS AND DEPENDENCIES

AS-1: The same transactions that are used to create, change and terminate positions in the current process will be used to automate the position transactions in the new process unless a more efficient method is identified during design.

DE-1: The operation of the HSA system will depend on certain data being stored that is currently not being stored. For example, planned hours needs to be stored in order to perform the validation of maximum planned work hours.

DE-2: The project team will need to assess what changes to the custom program that creates hourly grad personnel numbers are needed.

DE-3: I-9 and other student information currently stored in MITSIS will need to be fed to/stored in SAP for validation purposes. The project team will need to determine whether to modify the existing MITSIS bio(graphical) feed or create a new interface.

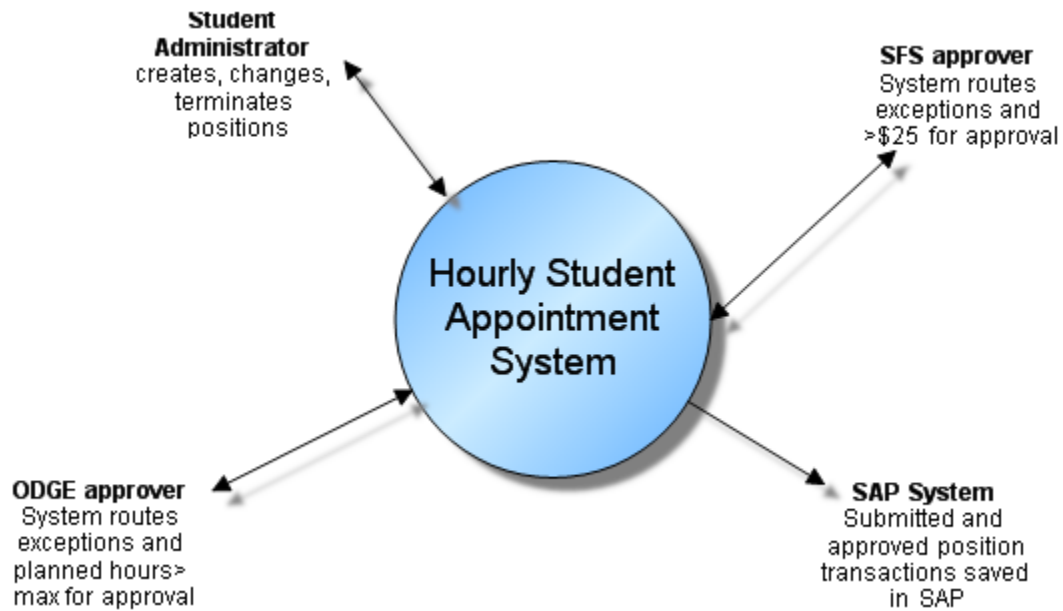
DE-4: UROP project data currently stored in MITSIS will need to be fed to/stored in SAP in order to be automatically populated in the web-based data entry form during creation of a new UROP position.

DE-5: The custom program used to create positions may need to be modified to be called in background and also to create positions retroactively.

## USE CASES

**Hourly Student Appointments**

The new Hourly Student Appointment System will fully automate the processing of new positions, changes and terminations of positions for hourly paid MIT students.



Hourly Student Appointments\_Context Diagram

## ACTORS



Name	Description	Participates in
<b>ODGE approver (A-3)</b>	An Office of the Dean for Graduate Education employee who is authorized to approve position requests with hours that exceed the allowed maximum and to override other exceptions in the Hourly Student appointment system.	UC-2 Create Position UC-4 Route for Approval UC-5 Change Position Attributes
<b>SAP SYSTEM (A-4)</b>	The system which will be updated with the information entered in Hourly Student Appointment system.	UC-3 Submit to SAP - no routing required UC-4 Route for Approval UC-6 Terminate Position
<b>SFS approver (A-2)</b>	A Student Financial Services employee who is authorized to	UC-2 Create Position UC-4 Route for Approval

	approve student position requests for more than \$25, and to override other exceptions in the Hourly Student Appointment System.	UC-5 Change Position Attributes
<b>Student Administrator (A-1)</b>	An MIT employee in a department, lab, or center (DLC) who is authorized to use the Hourly Student Appointment system to create, change and terminate hourly student positions.	UC-6 Terminate Position UC-2 Create Position UC-1 Verify student eligibility UC-3 Submit to SAP - no routing required UC-5 Change Position Attributes

## HOW THE USE CASES ARE ORGANIZED:

There are three main scenarios in the Hourly Student appointment system.

- Create position (UC-2)
- Change position (UC-5)
- Terminate position (UC-6)

If steps are shared by more than one transaction, they were placed in a separate use case so the information did not have to be repeated multiple times. For example, the following use cases are shared by all three scenarios:

- Submit to SAP – no routing required (UC-3)
- Route for approval (UC-4)

Verifying a student's eligibility (UC-1) when creating a new position was separated from the main 'Create position' use case to make it easier to review.

Requirements that supplement the use cases are referenced at the steps where they apply (e.g. REQ-1). The detailed description of the requirement can be found in the Requirements section at the back of the document.

Pre-conditions: What is true at the start of the use case, e.g. the user has logged onto the system.

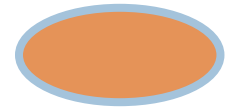
Success Guarantee: The expected state at the end of the use case if successfully executed

Main Scenario – The normal flow of events if everything goes as planned.

Extensions – Alternative paths and exceptions

## UC-1 - Verify student eligibility

[Student Administrator](#) tells the system for which student to create a position. The system confirms eligibility to be hired on the hourly payroll.



Trigger:

[Student Administrator](#) receives notification to create an hourly position

### PRECONDITIONS

Student Administrator is logged on to the system

### SUCCESS GUARANTEE

The Student Administrator will be allowed to proceed with the position transaction

### MAIN SUCCESS SCENARIO

1. [Student Administrator](#) indicates student for whom the new position will be created ([REQ-1](#))
2. The system finds the student being requested
3. The [Student Administrator](#) enters the start date and end date of the new position ([REQ-2](#)),([REQ-3](#))
4. The system verifies that the student is eligible to be hired on the hourly payroll for the dates entered ([REQ-4](#)), ([REQ-4.1](#)), ([REQ-4.2](#)), ([REQ-4.3](#))
5. The system displays student's name, course, year, degree, email address, enrollment status, and I-9 status
6. [Student Administrator](#) determines the right student was selected
7. The system verifies that the student has a social security number ([REQ-5](#))
8. System allows [Student Administrator](#) to proceed with creating the new position
9. Go to [UC-2](#), Create position

### EXTENSIONS

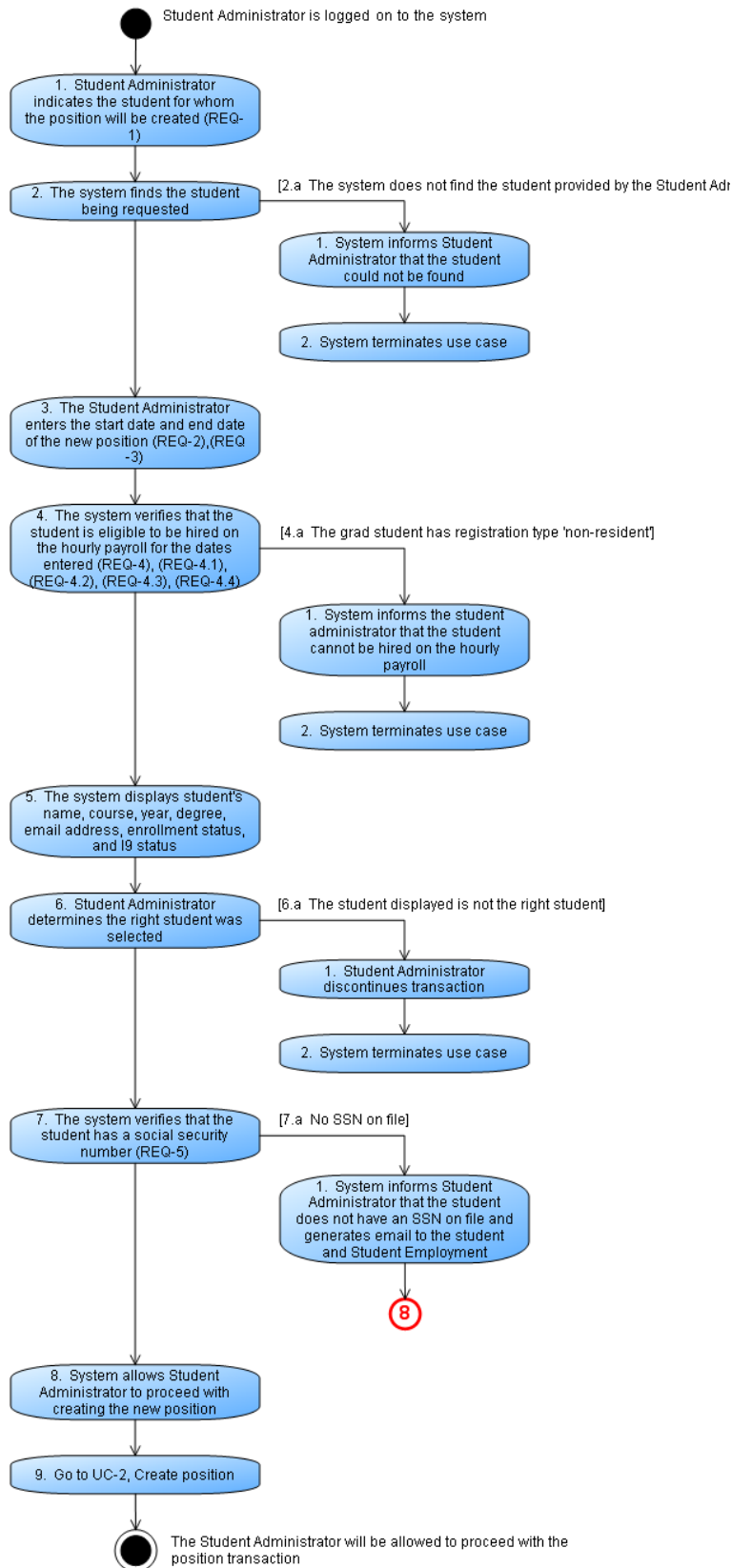
- 2.a The system does not find the student provided by the Student Administrator
  1. System informs Student Administrator that the student could not be found
  2. System terminates use case
- 4.a The grad student has registration type 'non-resident'
  1. System informs the student administrator that the student cannot be hired on the hourly payroll
  2. System terminates use case
- 6.a The student displayed is not the right student
  1. Student Administrator discontinues transaction
  2. System terminates use case
- 7.a No SSN on file
  1. System informs Student Administrator that the student does not have an SSN on file and generates email to the student and Student Employment
  2. Return to step 8

### Related Requirements

<b>REQ-1</b>	Search for Student by unique indicator	Functional
<b>REQ-2</b>	Start Date- Required Field	Functional
<b>REQ-3</b>	End Date- Required Field	Functional
<b>REQ-4</b>	Student eligibility criteria	Business Rule
<b>REQ-4.1</b>	Do not allow Grad "Non-Resident" doctoral students	Business Rule
<b>REQ-4.2</b>	I-9 on File	Business Rule
<b>REQ-4.3</b>	Student's Enrollment Status	Business Rule
<b>REQ-4.4</b>	Do Not allow Special Students	Business Rule
<b>REQ-5</b>	Verify social security number on file	Business Rule



### UC-1 Verify student eligibility



## UC-2 - Create Position

Create an hourly-paid student position that does not yet exist in SAP. The [Student Administrator](#) receives notification to create a new hourly-paid student position. The [Student Administrator](#) accesses the hourly student appointment system to enter and submit the new position which is then saved to SAP or routed for further approval before being saved to SAP.

Trigger: [Student Administrator](#) is notified that a new (non-UROP) position is to be created.

### PRECONDITIONS

The system has confirmed the student is eligible to be hired on the hourly payroll. UC-1 is complete.

### SUCCESS GUARANTEE

A new position is created in SAP SYSTEM which then sends email notification to Student Administrator, student and other email addresses entered.

### MAIN SUCCESS SCENARIO

1. [Student Administrator](#) tells the system to create a non-UROP position
2. System retrieves the student's existing positions ([REQ-21](#))
3. [Student Administrator](#) selects Job Title from a dropdown of job titles ([REQ-8](#))
4. [Student Administrator](#) enters Position Title ([REQ-9](#))
5. [Student Administrator](#) enters Position Description ([REQ-10](#))
6. [Student Administrator](#) enters the Location ([REQ-11](#))
7. [Student Administrator](#) enters department ([REQ-12](#))
8. [Student Administrator](#) selects the Time Group from a list of available time groups for their department ([REQ-13](#))
9. [Student Administrator](#) enters the cost object and allocated percentage ([REQ-14](#)), ([REQ-14.1](#)), ([REQ-14.2](#)), ([REQ-14.3](#))
10. [Student Administrator](#) enters the Hourly Rate ([REQ-15](#)), ([REQ-15.3](#))
11. [Student Administrator](#) enters the Work Hours per week ([REQ-16](#)), ([REQ-16.1](#)), ([REQ-16.2](#))
12. Go to [UC-3](#), submit to SAP, no routing required

### EXTENSIONS

- 1.a The Student Administrator tells the system to create a UROP position.
  1. System retrieves and defaults the following data from SAP into the web-based form (Job Title, UROP limit, Location, Hourly rate, Cost Object) ([REQ-7](#)), ([REQ-30](#))
  2. System confirms the start and end date are the same dates entered during student validation (same edits apply)
  3. Student administrator enters Position Title, Position Description, Time Group, Work hours (Requirements specified in main success scenario apply)
  4. Return to step 12
- 10.a Student Administrator enters hourly rate < min. rate
  1. System displays error message to Student Administrator that rate < min. rate is not allowed ([REQ-15.1](#))
  2. System terminates use case
- 10.b Student Administrator enters hourly rate > \$25/hr
  1. The system issues a warning message that the rate requires approval and must be routed to SFS approver ([REQ-15.2](#))
  2. Go to UC-4, route for approval
- 11.a Planned Work Hours > maximum allowed
  1. System generates an error ([REQ-16.1](#)), ([REQ-16.2](#))
  2. Student administrator corrects work hours and returns to step 12
- 11.b Work Hours - require approval

1. System notifies the Student Administrator that the work hours require approval (REQ-16.1), (REQ-16.2)
2. Go to UC-4, route for approval

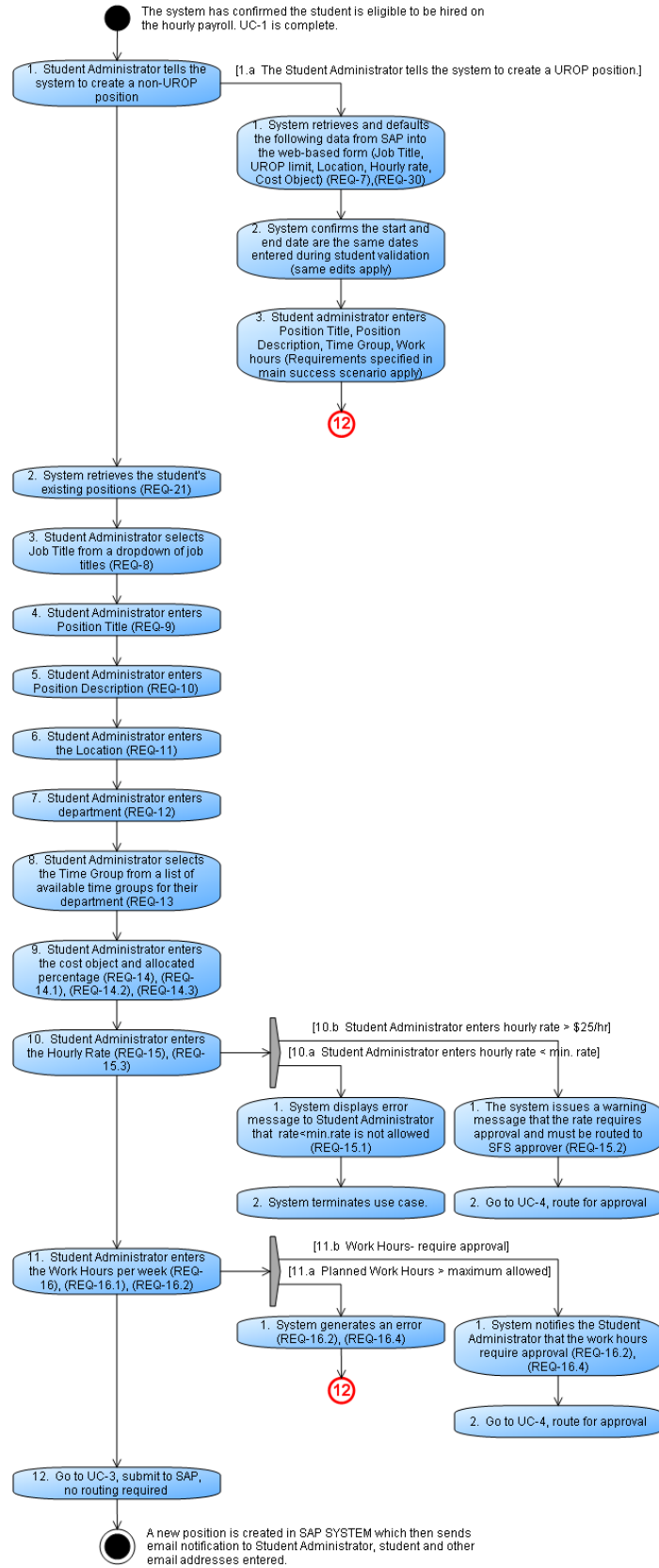
#### Related Requirements

<b>REQ-7</b>	Auto populate approved UROP projects	Functional
<b>REQ-8</b>	Job Titles from SAP	Functional
<b>REQ-9</b>	Position Title*	Functional
<b>REQ-10</b>	Position Description*	Functional
<b>REQ-11</b>	Location*	Functional
<b>REQ-12</b>	Department	Functional
<b>REQ-13</b>	Time Group*	Functional
<b>REQ-14</b>	Cost Object Validations*	Functional
<b>REQ-14.1</b>	Cost Object Expiration Message	Functional
<b>REQ-14.2</b>	Cost Object Allocation	Functional
<b>REQ-14.3</b>	Number of cost Objects	Functional
<b>REQ-15</b>	Hourly Rate*	Functional
<b>REQ-15.1</b>	Hourly rate < Min rate not allowed	Functional
<b>REQ-15.2</b>	Hourly Rate > \$25/hr	Business Rule
<b>REQ-15.3</b>	Hourly Rate allowed	Functional
<b>REQ-16</b>	Work Hours*	Business Rule
<b>REQ-16.1</b>	UnderGrad Students	Business Rule
<b>REQ-16.2</b>	Grad Students	Business Rule
<b>REQ-21</b>	Verify if position exists	Functional
<b>REQ-30</b>	UROP Limit Report	Functional

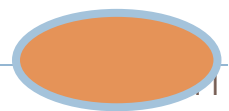
#### Related Documents

[HSA-Work Hours Rules Matrix](#)- The location of this document can be found in the references section of this document

UC-2 Create Position



UC-3 - Submit to SAP - no routing required



The [Student Administrator](#) has entered all the information for a new position or change position transaction. They review the information entered and make edits if necessary. The request is then submitted. Upon submit the request is saved in the [SAP SYSTEM](#) and email notification is sent.

Trigger: The [Student Administrator](#) has entered all the required fields for new position or change position transaction

**PRECONDITIONS**

The Student Administrator is executing a new position or change position transaction and has entered all required fields and has resolved any errors

**SUCCESS GUARANTEE**

The Student Administrator submits the request. Upon submit the request is saved in SAP SYSTEM and sends email notification to the Student Administrator, student and other email addresses specified by the Student Administrator

**MAIN SUCCESS SCENARIO**

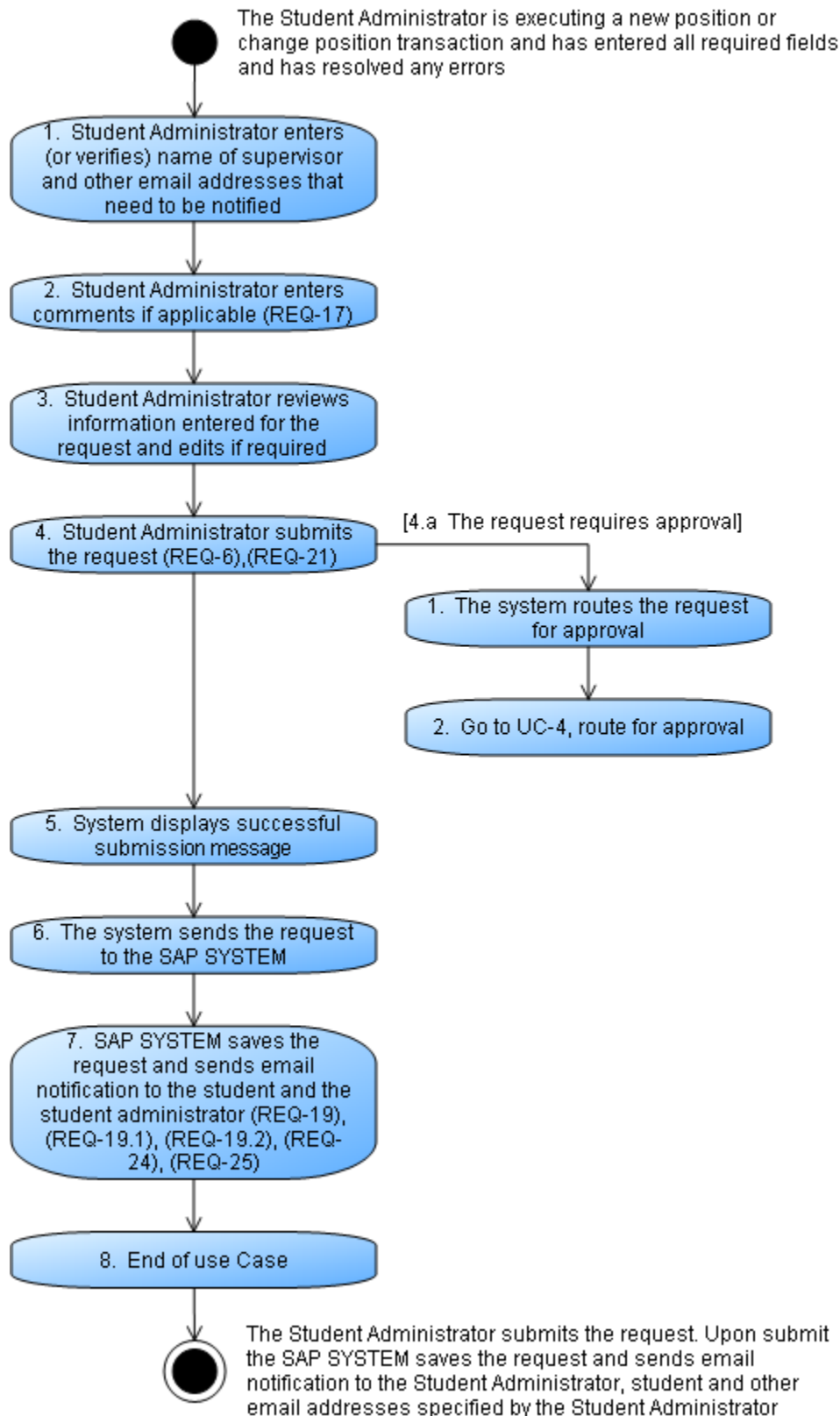
1. [Student Administrator](#) enters (or verifies) name of supervisor and other email addresses that need to be notified
2. [Student Administrator](#) enters comments if applicable ([REQ-17](#))
3. [Student Administrator](#) reviews information entered for the request and edits if required
4. [Student Administrator](#) submits the request ([REQ-6](#)), ([REQ-21](#))
5. System displays successful submission message
6. The system sends the request to the [SAP SYSTEM](#)
7. [SAP SYSTEM](#) saves the request and sends email notification to the student and the [student administrator](#) ([REQ-19](#)), ([REQ-19.1](#)), ([REQ-19.2](#)), ([REQ-24](#)), ([REQ-25](#))
8. End of use Case

**EXTENSIONS**

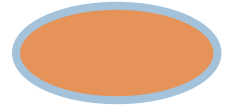
- 4.a The request requires approval
  1. The system routes the request for approval
  2. Go to UC-4, route for approval

Related Requirements		
<b>REQ-17</b>	Comment Box for Student Administrator	Functional
<b>REQ-19</b>	Email Notification	Functional
<b>REQ-19.1</b>	Email Content	Functional
<b>REQ-19.2</b>	Email Notification Page	Functional
<b>REQ-24</b>	Create hourly grad pernr	Functional
<b>REQ-25</b>	Verify if student's personnel record is locked	Functional

## UC-3 Submit to SAP - no routing required



**UC-4 - Route for Approval**



The [Student Administrator](#) is executing a new position or change position transaction and has entered information which needs approval. [Student Administrator](#) reviews the information and make edits if necessary. Upon submit the request is routed for approval. Approver accepts or rejects the request which is saved in the [SAP SYSTEM](#) and email notification is sent.

Trigger: A use case that needs approval branches off from the main use case

**PRECONDITIONS**

The Student Administrator has entered all required fields in a use case which needs approvals

**SUCCESS GUARANTEE**

The Student Administrator submits the request. The request is routed for approval. The approver accepts the request. [SAP SYSTEM](#) saves the request and sends email to the Student Administrator, student and other email addresses entered.

**MAIN SUCCESS SCENARIO**

1. Upon submit the system routes the request to [SFS approver](#) or [ODGE approver](#) ([REQ-26](#))
2. The approver reviews the request (and modifies if necessary) ([REQ-18](#))
3. The approver indicates approval of the request
4. The system sends the request to [SAP SYSTEM](#)
5. [SAP SYSTEM](#) saves the request and sends email notification ([REQ-19](#)), ([REQ-19.1](#)), ([REQ-19.2](#)), ([REQ-24](#)), ([REQ-25](#))
6. End of Use Case

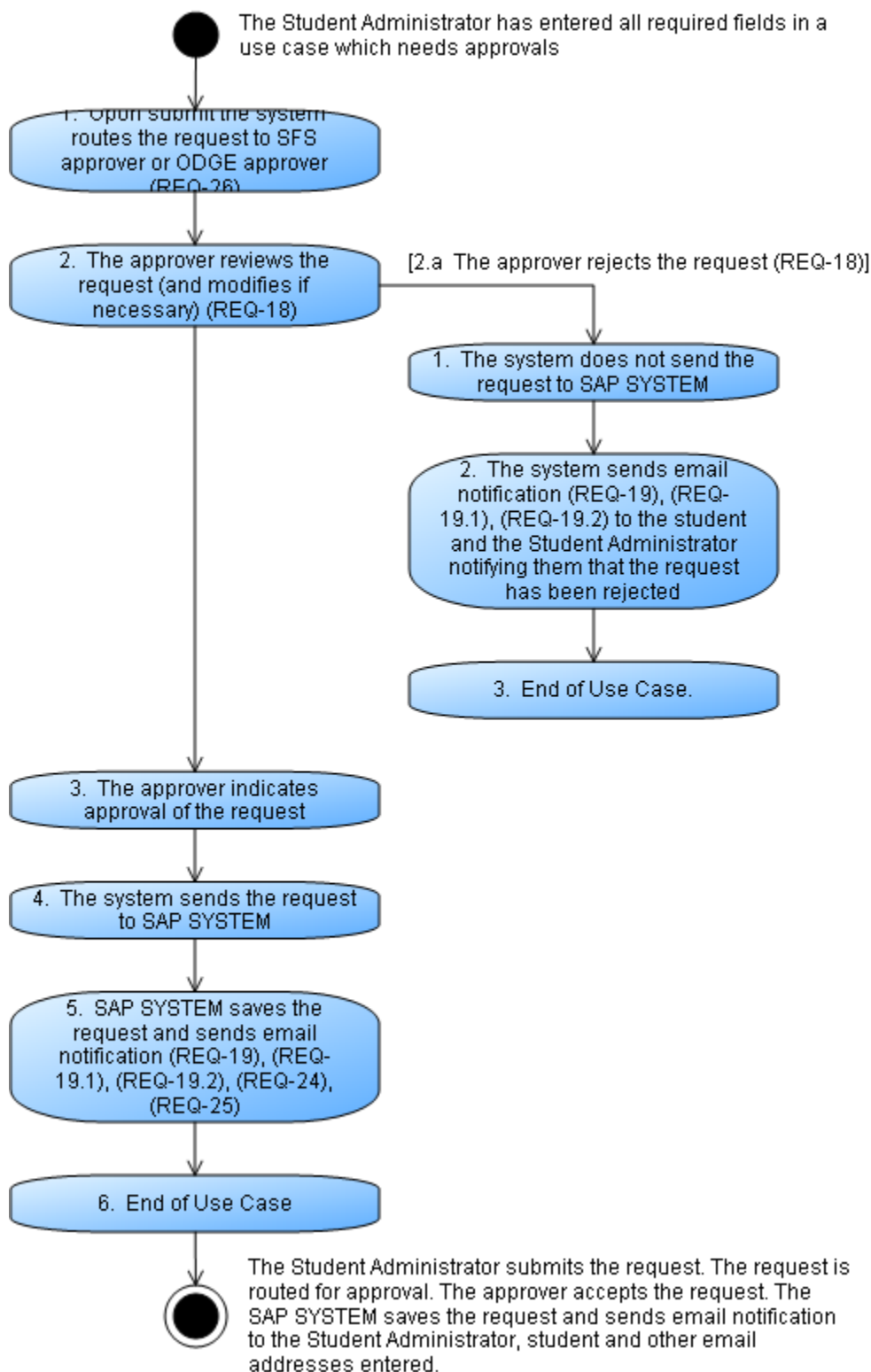
**EXTENSIONS**

- 2.a The approver rejects the request ([REQ-18](#))
  1. The system does not send the request to SAP SYSTEM
  2. The system sends email notification ([REQ-19](#)), ([REQ-19.1](#)), ([REQ-19.2](#)) to the student and the Student Administrator notifying them that the request has been rejected
  3. End of Use Case.

Note: When a request is routed for approval, offline discussions may need to take place that may result in changes to the request. The approver will make the changes, add a comment and submit the request to SAP

Related Requirements		
<b>REQ-18</b>	Comment Box for ODGE	Functional
<b>REQ-19</b>	Email Notification	Functional
<b>REQ-19.1</b>	Email Content	Functional
<b>REQ-19.2</b>	Email Notification Page	Functional
<b>REQ-24</b>	Create hourly grad pernr	Functional
<b>REQ-25</b>	Verify if student's personnel record is locked	Functional
<b>REQ-26</b>	Approval Routing order	Functional

## UC-4 Route for Approval





## UC-5 - Change Position Attributes

Change attributes of an hourly paid student position that exists in the [SAP SYSTEM](#). The [Student Administrator](#) receives notification that one or more attributes of an existing hourly paid position need to be changed. The [Student Administrator](#) accesses the hourly student appointment system, enters the changes and submits the request which is then saved in [SAP SYSTEM](#). When system populates the position information the fields for position attributes are “read only” unless specified as editable in the use case.

Trigger: [Student Administrator](#) is notified that a position is to be changed.

### PRECONDITIONS

The system has an existing active hourly paid position for the student.

The system has verified the position can be changed.

### SUCCESS GUARANTEE

Student Administrator submits the request for position changes. [SAP SYSTEM](#) saves the changes and sends email notification to the Student Administrator, student and other additional email addresses specified by the Student Administrator.

### MAIN SUCCESS SCENARIO

1. [Student Administrator](#) indicates student for whom the position change will be changed ([REQ-1](#))
2. The system finds the student being requested
3. [Student Administrator](#) tells the system they want to make a change and enters the Effective date of change ([REQ-20](#))
4. The system retrieves all active hourly positions held by the student ([REQ-29](#)), ([REQ-29.1](#))
5. [Student Administrator](#) selects the position that needs to be changed
6. The system displays all the position information
7. [Student Administrator](#) changes one or more of the position attributes ([REQ-23](#))
8. [Student Administrator](#) changes START DATE ([REQ-2](#))
9. [Student Administrator](#) changes END DATE (EXTENDS POSITION) ([REQ-22](#)), ([REQ-22.1](#)), ([REQ-22.2](#))
10. The system verifies that the student is eligible to be on the hourly payroll for the duration of the position ([REQ-4.1](#)), ([REQ-4.3](#))
11. [Student Administrator](#) changes TIME GROUP ([REQ-13](#))
12. [Student Administrator](#) changes POSITION TITLE ([REQ-9.0](#))
13. [Student Administrator](#) changes WORK HOURS ([REQ-16](#))([REQ-16.1](#)), ([REQ-16.2](#))
14. [Student Administrator](#) changes HOURLY RATE ([REQ-15](#)), ([REQ-15.1](#)), ([REQ-15.2](#)), ([REQ-15.3](#))
15. Go to [UC-3](#), Submit to SAP, no routing required

### EXTENSIONS

\*.a No SSN on file

1. System informs Student Administrator that the student does not have an SSN on file and generates email to the student and Student Administrator ([REQ-5](#))

13.a Work hours require routing

1. Go to [UC-4](#), route for approval

13.b Work hours > allowed

1. System issues error, terminates use case

14.a hourly rate requires routing

1. Go to [UC-4](#), route for approval

14.b Hourly rate < minimum allowed

1. System issues error, terminates use case

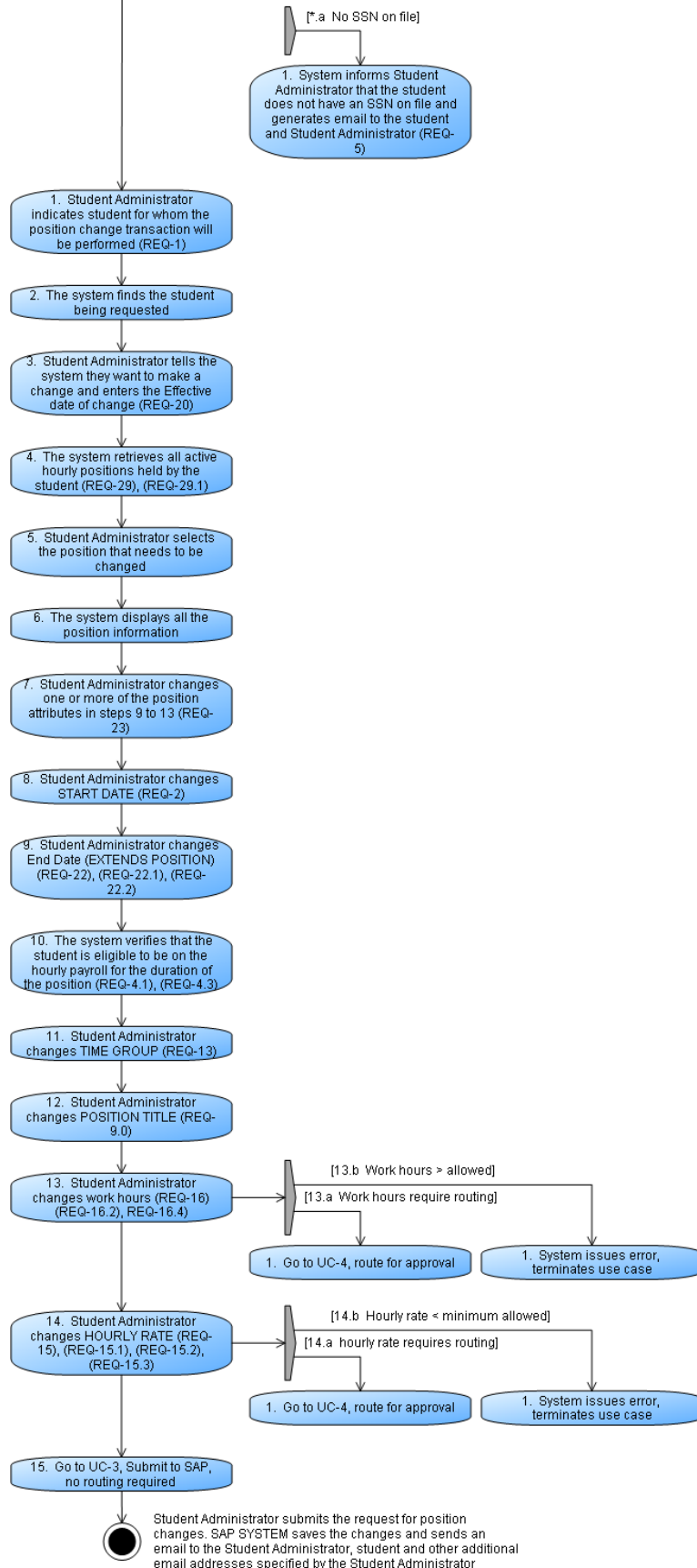
Note: Key fields that can be changed are detailed in the main scenario to allow us to show special requirements and exceptions; however, users are allowed to change other fields (see [REQ-23](#)).

## Related Requirements

<b>REQ-1</b>	Search for Student by unique indicator	Functional
<b>REQ-2</b>	Start Date*	Functional
<b>REQ-4</b>	Student eligibility criteria	Business Rule
<b>REQ-4.1</b>	Do not allow Grad "Non-Resident" doctoral students	Business Rule
<b>REQ-4.3</b>	Student's Enrollment Status	Business Rule
<b>REQ-5</b>	Verify social security number on file	Business Rule
<b>REQ-13</b>	Time Group*	Functional
<b>REQ-15</b>	Hourly Rate*	Functional
<b>REQ-15.1</b>	Hourly rate<Min rate not allowed	Functional
<b>REQ-15.2</b>	Hourly Rate>\$25/hr	Business Rule
<b>REQ-15.3</b>	Hourly Rate allowed	Functional
<b>REQ-16.0</b>	Work Hours*	Functional
<b>REQ-16.1</b>	Undergrad Students	Business Rule
<b>REQ-16.2</b>	Grad Students	Business Rule
<b>REQ-22.1</b>	UROP Position	Functional
<b>REQ-22.2</b>	Non-UROP Position	Functional
<b>REQ-23</b>	Change Position Attributes- Editable Fields	Functional
<b>REQ-29</b>	Show ALL active positions	Functional
<b>REQ-29.1</b>	Position Information	Functional

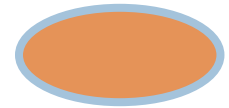
### UC-5 Change Position Attributes

The system has an existing active hourly paid position for the student.  
 The system has verified the position can be changed



## UC-6 - Terminate Position

Assign a new end date prior to the current end date of an existing position



Trigger: [Student Administrator](#) is notified that a position is to be terminated.

### PRECONDITIONS

Student Administrator is logged in  
 The student exists in SAP  
 The student position exists in SAP  
 The student is not non-resident doctoral Grad

### SUCCESS GUARANTEE

SAP SYSTEM assigns a new end date to the position  
 SAP SYSTEM send an email notification to the Student Administrator that the termination request was successful

### MAIN SUCCESS SCENARIO

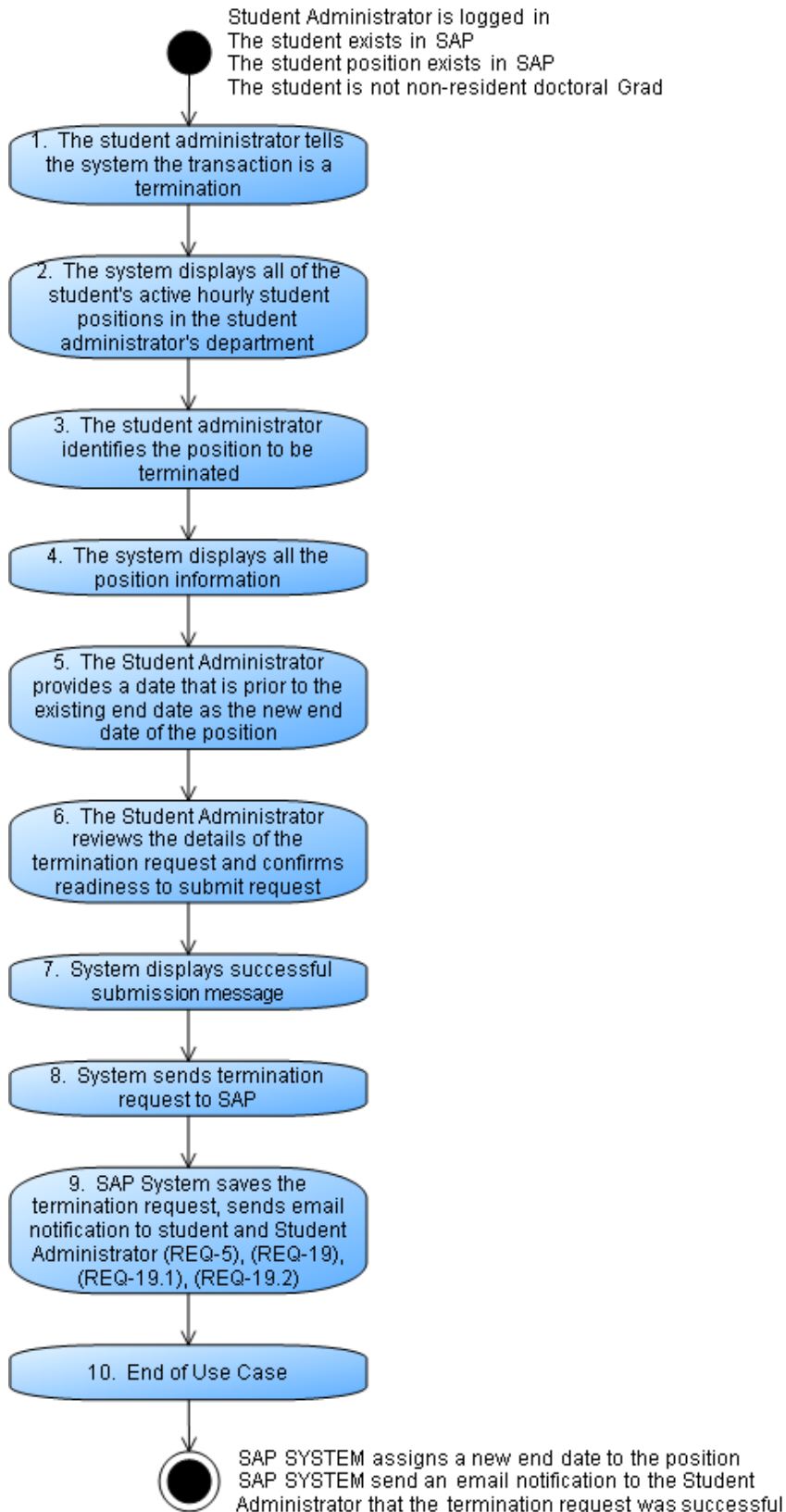
1. The [student administrator](#) tells the system the transaction is a termination
2. The system displays all of the student's active hourly student positions in the [student administrator's](#) department
3. The [student administrator](#) identifies the position to be terminated
4. The system displays all the position information
5. The [Student Administrator](#) provides a date that is prior to the existing end date as the new end date of the position
6. The [Student Administrator](#) reviews the details of the termination request and confirms readiness to submit request
7. System displays successful submission message
8. System sends termination request to SAP
9. [SAP System](#) saves the termination request, sends email notification to student and [Student Administrator](#) (REQ-5), (REQ-19), (REQ 19.1), (REQ 19.2)
10. End of Use Case

### EXTENSIONS

#### Related Requirements

<b>REQ-5</b>	Verify social security number on file	Business Rule
<b>REQ-19</b>	Email Notification	Functional
<b>REQ-19.1</b>	Email Content	Functional
<b>REQ-19.2</b>	Email Notification Page	Functional

## UC-6 Terminate Position



## REQUIREMENTS

An asterisk \* on any requirement indicates a required field to be entered by the student administrator.

Requirement	Description	Type
<b>REQ-1</b> Search for Student by unique indicator	The system administrator must provide a unique identifier to the system such as MIT ID and/or first and last name in order to process a position transaction.	Functional
<b>REQ-2</b> Start Date*	Start Date- Required Field. The Student Administrator enters the actual start date of the appointment. If needed, the system must allow the <a href="#">Student Administrator</a> to enter a start date in the past (retroactive) when creating a new appointment or when changing the start date of an appointment. The system must allow the retroactive start date as early as the PERNR start date or the payroll retroactive settings whichever is earlier.	Functional
<b>REQ-3</b> End Date*	End Date- Required Field. The end date is not defaulted, <a href="#">Student Administrator</a> enters the actual end date of the hourly student appointment	Functional
<b>REQ-4</b> Student eligibility criteria	Student must meet all eligibility criteria to be on the hourly payroll.	Business Rule
<b>REQ-4.1</b> Do not allow Grad "Non-Resident" doctoral students	Grad student conducting their thesis work off campus (registration type "Non-Resident") cannot be allowed on the hourly payroll (MIT Policy).	Business Rule
<b>REQ-4.2</b> I-9 on File	The student must have an I-9 on file to be allowed on an hourly student payroll.	Business Rule
<b>REQ-4.3</b> Student's Enrollment Status	The students must have enrollment status of "Registered-RE" "Eligible to register-EL" to be allowed on the hourly payroll. Students with Registration Type of R – Regular and X – Cross-registered are eligible for hourly appointments	Business Rule
<b>REQ-4.4</b> Do not allow "Special" students	Students with registration type "Special-S" are not eligible to be hired on hourly appointments.	
<b>REQ-5</b> Verify social security number on file	Student must have a social security number for tax purposes. The form will not stop the transaction from being processed if the student does not have an SSN. The system will generate a warning and send email to the student.	Business Rule
<b>REQ-6</b> Duplicate Positions not allowed	If <a href="#">Student Administrator</a> tries to create a new position the system checks position attributes and prevents a duplicate position from being created.	Functional
<b>REQ-7</b> Auto populate approved UROP projects	The system shall only auto-populate UROP projects which have an "Approved Status".	Functional
<b>REQ-8</b> Job Titles from SAP	List of Job titles from <a href="#">SAP SYSTEM</a> need to be provided to the <a href="#">Student Administrator</a> . The job titles displayed to the <a href="#">Student Administrator</a> must be restricted depending on the type of student (Grad vs. Undergrad) and	Functional

	type of job (UROP vs. Non-UROP)	
<b>REQ-9</b> Position Title*	Position Title- Required Field. <a href="#">Student Administrator</a> must enter a unique position title for each hourly student appointment. System must validate the position title is not same as job title. System must validate the position title is not same as other hourly paid positions the student has. UROP: When Student Administrator creates a UROP position the position title will default as “UROP-Term Code-Supervisor first initial last name” E.g. UROP-FA2011-McCollin. This field will be editable by the <a href="#">Student Administrator</a>	Functional
<b>REQ-10</b> Position Description*	Position Description- Required Field. <a href="#">Student Administrator</a> must enter a short description of the work the student will perform. UROP: For UROP projects the Research Proposal Title will default as the Position description and will be editable by the <a href="#">Student Administrator</a>	Functional
<b>REQ-11</b> Location* and Job Address*	Job Address- Required Field for UROPs. The field is applicable to UROP projects only. The system defaults information in this field. The field is Read Only. Location- Non-UROPs: There is no system default. The <a href="#">Student Administrator</a> must select the location of the position from the given choices- “On Campus” and “Off Campus” UROPs- There is no system default. The <a href="#">Student Administrator</a> must select the location based on the information populated by the system in the “Job Address” field.	Functional
<b>REQ-12</b> Department*	Department- Required Field. <a href="#">Student Administrator</a> must enter the department in which the student is being hired.	Functional
<b>REQ-13</b> Time Group*	Time Group- Required Field. <a href="#">Student Administrator</a> must always select a time group from a list of active time groups displayed for their department. The Time Group is required for a student to enter a timesheet to be paid.	Functional
<b>REQ-14</b> Cost Object Validations*	Required: The cost object(s) must pass all validations in order to be accepted by the System. The cost object(s) must pass all validations in order to be accepted by the System. The system will enforce the standard restrictions for cost objects that are used to pay individuals (e.g. cannot be a fabricated equipment account, cannot have a term code).	Functional
<b>REQ-14.1</b> Cost Object Expiration Message	System must display a message to the Student Administrator if a cost object being entered is expiring before the position end date entered on the hourly appointment	Functional
<b>REQ-14.2</b> Cost Object Allocation	<a href="#">Student Administrator</a> must enter at least 1 cost object. If 1 cost object is entered. The allocation is 100%. If more than 1 cost object is entered the total allocation percentage must equal 100% The cost object allocation fields must always be editable when the cost object is an editable field	Functional
<b>REQ-14.3</b> Number of cost Objects	<a href="#">Student Administrator</a> can enter as many cost objects as required for the position.	Functional
<b>REQ-15</b>	Hourly Rate- Required Field.	Functional

Hourly Rate*		
<b>REQ-15.1</b> Hourly rate < Min rate not allowed	MIT periodically establishes a separate minimum hourly rate for UROP and non-UROP positions. The system must not allow the <a href="#">Student Administrator</a> to enter a rate that is lower than the minimum rate for a position. Use the UROP min. rate if the position is UROP. Use the non-UROP min rate if the position is non-UROP.	Functional
<b>REQ-15.2</b> Hourly Rate > \$25/hr	On "Create Appointment", Hourly rates > \$25/hr are routed for approval to SFS. On "Change Appointment", 1) When an attribute other than hourly rate is changed for a position with an existing hourly rate > \$25/hr, the system must not route it for approval to the <a href="#">SFS approver</a> since the rate was already approved when the position was initially created. Exception: Route for position description changes  2) If the current hourly rate of a position is >\$25, and the rate is changed to a higher rate AND/OR Position description is changed, route to <a href="#">SFS approver</a> for approval	Business Rule
<b>REQ-15.3</b> Hourly Rate allowed	The system must allow the <a href="#">Student Administrator</a> to enter the following rate and successfully save it in SAP without any approvals- Min. Rate < <b>Hourly Rate allowed without approvals</b> < \$25/hr	Functional
<b>REQ-16</b> Work Hours*	Work Hours- Required Field.	Business Rule
<b>REQ-16.1</b> Undergrad Students	<b>Total Allowed Planned Hours</b>  <b>1. US Citizen and Permanent Resident Undergraduate Students.</b> A combined total of 20 hrs or more for all positions they hold during Spring/Fall. The system should generate a warning message and send an email alert to the student. The 20 hour rule is a general guideline. The student can work more than 20 hours at the supervisor's discretion.  A combined total of 40 hrs or more for all positions they hold during IAP/Summer. The system should generate a warning message if the planned work hours exceed 40 hrs and send an email alert to the student.  <b>2. International Undergrad Students</b> - Undergrads who are international students are not allowed to work:  <ul style="list-style-type: none"> <li>• More than 20 hrs during Spring/Fall. The system issues an error message if the planned work hours on all actively held positions by the student exceed 20 hours.</li> <li>• The system is required to generate an error message for Int'l Undergrad student because working excess hours can impact their immigration status.</li> <li>• More than 40 hrs during IAP/Summer. The system generates a warning message if the planned work hours on all actively held positions by the</li> </ul>	Business Rule



student exceed 40 hours.

**REQ-16.2**

Grad Students

**Total Allowed Planned Hours**

Business Rule

1. **US Citizen and Permanent Resident Graduate Students.** Total planned work hours for a **US Grad student** should not exceed 30 hrs during Spring/Fall and 40 hrs during IAP/Summer.
2. **International Graduate Students** - Total planned work hours for **Int'l Grad student** cannot exceed 20 hrs during Spring/Fall and 40 hrs during IAP/Summer.

**Level of Effort for Exempt Grad Appointments**

Grad students who hold one or more graduate appointments are allowed to also hold an hourly appointment, but maximum planned hours for the hourly position vary depending on the % effort and type of graduate appointment they hold. Since grad appointments are exempt positions and do not carry hours, the system must calculate the planned hours that would be associated with the exempt graduate appointment based on the following specification to determine the total planned hours for the hourly position:

The following hours must be accounted if a Grad student holds the following positions in 100% capacity.

They are used as the base to calculate the hours planned for the respective Grad appointments. E.g. if a Grad student works as RA in 50% capacity, he is assumed to work 50% of 20 hrs = 10 hrs.

- 100% Resident Assistant (RA) = 20 hrs
- 100% Teaching Assistant (TA) = 20 hrs
- 100% Instructor G (IG) = 20 hrs
- Graduate Resident Tutor (GRT; always 100%) = 10 hrs
- Fellow=always 0 hrs

**Note for GRT:** The GRTs can be identified with the supplement type and going forward "grad student dorm resident" will be used. The percentage for level of effort is always 100%.

**System Behavior for Excess Hours on an Hourly Appointment****Calculation of hours available for hourly appointment-**

US Grad:

Total Allowable Planned Hrs for all jobs held by the student, including the current request = 30

1. Total planned hours  $\leq 30$ . Allow the transaction
2. Total planned hours  $> 30$  to 35. Route for approval to ODGE approver
3. Total planned hours  $> 35$ . Generate a warning message
4. In special cases, a student may be allowed to work more than 35 hours. If the planned hours exceed 35 hours, the [Student Administrator](#) will receive a prompt with emphatic message giving them the option to route for special approval. The request will be routed to ODGE for approval.

**Note:** ODGE specifically requested the error with override capability because they do not want all requests that exceed 35 hours to automatically be sent to them.

#### **International Graduate Students:**

Total Allowable Planned Hrs for all jobs held by the student, including the current request = 20

1. Total planned hours  $\leq 20$ . Allow the transaction
2. Total planned hours  $> 20$ . Generate an error

#### **BUSINESS RULE EXAMPLES FOR GRAD STUDENTS:**

##### **1. US Grad who is a 100% Resident Assistant (RA):**

*Planned hours for a 100% RA is assumed to be 20 hours, so the student has 10 hours available for an hourly paid appointment.*

##### **Student administrator enters:**

- 10 hours ---- Allow transaction
- 14 hours -----Route for approval
- 16 hours ---- Generate an Error

##### **2. Int'l Grad who is a 50% Teaching Assistant (TA):**

*An international Grad who is a 50% TA is assumed to work 10 hours (.50 x 20), so the student has 10 hrs available to work in an hourly paid appointment.*

##### **Student administrator enters:**

- 9 hours ---- Allow transaction
- 11 hours --- Generate an Error

##### **Note for IAP/Summer:**

Show warning message and send email alert to student when hours exceed 40 hrs for US and International Grads. ODGE will monitor through >40 hr report in the data warehouse.

- Grad students with fellowship - The system must display a warning message to [Student Administrator](#) that the student is a fellow and they must confirm(offline process) that the fellowship allows for an hourly appointment before proceeding with the transaction

3. Permanent Resident Graduate Student who has an RA/TA appointment of 40% each (total of 80%).

*The student would be assumed to work a total of 16 hours (.4 x 20 = 8 hrs for each position; 16 hours), and would have 14 (max of 30 – 16) hours available to work in an hourly paid position.*

**Student administrator enters:**

- 14 hours ---- Allow transaction
- 14.5 hours ---Route for approval
- 19.5 hours ---- Generate an Error
- System prompts student administrator to route for special approval
- System administrator has two options: route for approval or notify supervisor that student is not allowed to work requested number of errors/change hours

<b>REQ-17</b> Comment Box for Student Administrator	Student Administrator must have a comment box to record any notes or comments. This will be saved in SAP.	Functional
<b>REQ-18</b> Comment Box for Approvers	There must be a comment box for approvers to make any comments when approval requests are processed. Information entered here must be saved for audit trail.	Functional
<b>REQ-19</b> Email Notification	The <a href="#">SAP SYSTEM</a> must send email notification to the <a href="#">Student Administrator</a> , approver (in case of approvals), student and other email addresses indicated in the cc field by the <a href="#">Student Administrator</a> after the request has been saved in SAP E.g. new position has been created, existing position has been changed, existing position has been terminated. The email notification must display the comments made by the <a href="#">Student Administrator</a> and/or the approvers to everyone except the students.	Functional
<b>REQ-19.1</b> Email Content	The email notification must include the following information- MIT ID, Position Name and #, Hourly Rate and UROP limit (for UROP positions).	Functional
<b>REQ-19.2</b> Email Notification Page	The email notification must be 1 page	Functional
<b>REQ-20</b> Effective Date of	1. The date on which the “Change Appointment” transaction will be effective in SAP. This field is required when processing changes to a	Functional

the Change*	<p>position.</p> <p>2. When processing a change to the start date, the effective date of the change will be the same as the start date.</p>	
<b>REQ-21</b> Verify if position exists	<p>The system checks all the existing positions held by a student for the following attributes-</p> <ul style="list-style-type: none"> <li>Start date</li> <li>End date</li> <li>Position Title</li> <li>Department</li> <li>Hourly Rate</li> <li>Time Group</li> <li>Work hours</li> <li>Cost Object(s)</li> </ul> <p>Two unique positions can have all attributes with matching values except the position title. If the position title differs they are considered unique positions.</p> <p>Give an error message to <a href="#">Student Administrator</a> if the new position qualifies as an existing position.</p>	Functional
<b>REQ-22</b> Extend Position	The end date is being changed to a date that is later than the current end date.	Functional
<b>REQ-22.1</b> UROB Position	The system must not allow the <a href="#">Student Administrator</a> to extend a UROB position (change end date later than current end date) and display an error message.	Functional
<b>REQ-22.2</b> Non-UROB Position	The system must allow the <a href="#">Student Administrator</a> to extend a non-UROB position. The cost object must also be allowed to be updated by the <a href="#">Student Administrator</a> . (note: the same cost object can be used, assuming it passes the cost object validations)	Functional
<b>REQ-23</b> Change Position Attributes- Editable Fields	<p>The following fields must be editable when the <a href="#">Student Administrator</a> is executing a “Change Appointment” transaction for a non-UROB position</p> <ul style="list-style-type: none"> <li>Start Date</li> <li>End Date (except for UROBs)</li> <li>Job title</li> <li>Position title</li> <li>Position description</li> <li>Hourly Rate</li> <li>Time Group</li> <li>Location</li> <li>Work hours</li> <li>MIT Supervisor</li> <li>Other Supervisor</li> </ul> <p>All other position-related fields should be “read only” when the <a href="#">Student Administrator</a> is processing a change to a position. A job title cannot be changed from UROB to non-UROB and vice versa because this would circumvent the UROB approval process. UROB positions cannot be extended (i.e. end date cannot be moved to a later date than current end date in SAP).</p>	Functional

Only the following fields can be changed for a UROP position which is DIRECT FUNDED-

- Position Title
- Position Description
- Location
- Planned Hours
- Time Group
- MIT Supervisor

Only the following fields can be changes for a UROP position which is FACULTY FUNDED-

- Position Title
- Position Description
- Location
- Planned Hours
- Time Group
- Rate of Pay
- UROP Limit
- MIT Supervisor

The following fields can NEVER be changed for a UROP position

- Job Address
- Cost Object

<b>REQ-24</b> Create hourly grad PERNR	When creating a new hourly position for a graduate student, SAP must first make sure an hourly graduate Personnel Number (PERNR) exists in SAP for the student. If the hourly graduate PERNR does not exist, SAP must first create it before creating the new position.	Functional
<b>REQ-25</b> Verify if student's personnel record is locked	On submit to SAP, system confirms that student's record is not locked in SAP (for payroll or other update) prior to starting the SAP processing. If system finds the PERNR locked a later attempt will be made by the system to make the updates in the <a href="#">SAP SYSTEM</a>	Functional
<b>REQ-26</b> Approval Routing order	If routing is required to both the <a href="#">SFS approver</a> and <a href="#">ODGE approver</a> , route to the <a href="#">ODGE approver</a> first, then the <a href="#">SFS approver</a> .  <a href="#">ODGE approver</a> : Only the work hours field must be editable <a href="#">SFS approver</a> : The Hourly Rate, Job Title, Position Title and Position description must be editable	Functional
<b>REQ-27</b> Overrides	ODGE requires a method to process exceptions that would normally fail the planned work hours eligibility check on the form.  In some cases, ODGE may determine it is allowable for a student to work more than the pre-established limits. If the student administrator enters planned hours >35, they will receive a prompt asking if they want to route to ODGE for special approval. Currently this functionality is applicable only to US Grad students. When creating an appointment if international student has >20 planned	Functional

hours and start date is in the past, request will be routed to SFS if undergraduate, ODGE if graduate.

**Notes:** the following were initially requested as overrides; however, during the requirements review process by the signers, it was determined that these requirements were no longer needed.

- I-9 was not submitted, but the student has worked and needs to be paid. For this case no additional functionality is required. The I-9 form must first be completed and I-9 status entered in the system in order to create the position.
- Enrollment Status - Student had the correct enrollment status (registered, eligible to register) during the period of work but the appointment was never entered in the system. The student administrator needs to enter the request in the HSA system. If a student did not have the correct enrollment status during the period of the appointment, they cannot be paid as a student, even if they already worked. They must be paid via another means. The student administrator needs to coordinate with the Payroll Office.

<p><b>REQ-28</b> SAP errors</p>	<p>The HR-Payroll Service Center requires a log of errors generated if SAP fails to process the request. The log will facilitate research and re-processing of errors. The service center requires the ability to view the information as it was entered by the <a href="#">student administrator</a>. The system must notify the <a href="#">Student Administrator</a> if the system encounters an error and cannot complete processing.</p>	<p>Functional</p>
<p><b>REQ-29</b> Show ALL active positions</p>	<p>When <a href="#">Student Administrator</a> tells the system that a position needs to be changed for a student the system must display ALL active positions for the student including the ones outside the <a href="#">Student Administrator</a>'s department. They must not be allowed to change the Active positions outside their department</p>	<p>Functional</p>
<p><b>REQ-29.1</b> Position Information</p>	<p>The following information must be displayed for all active appointments held by the student to help the <a href="#">Student Administrator</a> select the right position to make a change:</p> <p>Position Title, Start Date, End Date, Hours and Rate of Pay</p>	<p>Functional</p>
<p><b>REQ-30</b> UROP Limits-Report</p>	<p>The UROP Office needs a report to monitor UROP limits. This report will be sent to the UROP office and be readily available for access by the <a href="#">Student Administrator</a> in the data warehouse.</p>	
<p><b>REQ-31</b> View Transaction</p>	<p>The system must allow the <a href="#">Student Administrators</a> ability to search for transactions executed by them according to the following given criteria: Student name, MIT ID, Date range, Preparer, Transaction #, Transaction type and Submit date. The "View Transaction" functionality will prevent printing of email confirmations when various transactions are executed.</p>	
<p><b>REQ-32</b> Student's Appointments</p>	<p>When a "Create Appointment" transaction is being executed the system must allow the <a href="#">Student Administrators</a> ability to view active appointments held by the student in the date range which is being entered as the Begin and End Date of the new appointment. For E.g. <a href="#">Student Administrator</a> is creating an appt for 1/31/2011 – 5/30/2011. Student already has:</p> <p>RA 50% 10 hours (assumed) 2/1/2011 – 4/30/2011 - would show in</p>	

student's active appointments link

TA 50% 10 hours (assumed) 6/1/2011 – 12/31/2011 – would NOT show in student's active appointments link (dates do not overlap 1/31 – 5/30)

Hrly appt 10 hours 1/1/2011 – 6/30/2011 – would show in student's active appointments link

Information is displayed in the following order:

Position Title, Department, Start Date, End Date, Hours, Rate of Pay

Planned Hours: Display this information for all the positions held by the student for the begin and end dates specified by the DLC user. For Grad appointments the percentage allocation will be converted to planned hours per business rules. E.g. 100% RA appt. = 20 hrs.

Rate of Pay: Display this information only for positions held in the department/s that the DLC user is authorized for. For Grad appointments the field must read "NA" and no rate information must be displayed. For hourly positions in departments for which the student administrator does not have authorizations, display "On File"

Student Administrators can cancel an existing appointment. A canceled appointment implies that the start date of the appointment is same as the end date and no changes are allowed to the appointment

#### **REQ-33**

Cancel  
Appointment:

Non-UROPs: The student administrator searches for a MIT supervisor who is an active MIT employee

UROPs: The MIT supervisor is populated for the UROP project

#### **REQ-34**

MIT Supervisor

Non-UROPs: For non-UROP positions the student administrator can also enter the other supervisor field which is an optional field. Examples of other supervisor are Grad student, external supervisor etc.

#### **REQ-34.1**

Other Supervisor

## EXTERNAL INTERFACE REQUIREMENTS

### User Interfaces

UI-1: The Hourly Student Appointment System shall conform to IS&T's design and programming standards.

UI-2: The Hourly Student Appointment System shall provide a link to the help documentation.

UI-3: The web pages shall permit complete navigation of the Hourly Student Appointment system using mouse

and keyboard combinations. We will work with the MIT accessibility office to ensure the system is in compliance with accessibility standards.

UI-4: The Hourly Appointment System will include a transaction log that will be accessible from the SAP GUI by the HR-Payroll Service Center Staff. The log will store successful transactions, as well as warnings and errors.

## Hardware Interfaces

No hardware interfaces have been identified.

## Software Interfaces

SI-1: MITSIS

S1-1.1 An interface from MITSIS will send biographical information to SAP daily. This information will be used by the HSA system for validations

S1-1.2 An interface from MITSIS will send UROP project data to SAP daily to be used when creating positions in the HSA system.

## Communications Interfaces

The requirements for communication interfaces have been incorporated in the use cases described in this document.

## OTHER NONFUNCTIONAL REQUIREMENTS

### Performance Requirements

PE-1: The system shall accommodate on average about 7,000 transactions per year; and accommodate as numbers increase every year.

PE-2: All web pages generated by the system shall be downloadable comparable in speed or faster than the Appointment Processing Redesign (APR) Hires application.

PE-3: Responses to queries shall be comparable in speed or faster than the Appointment Processing Redesign (APR) Hires application.

PE-4: The system display of confirmation messages to users shall be comparable in speed or faster than the Appointment Processing Redesign (APR) Hires application.

PE-5: The system shall accommodate an average of 200 users. The number of users is likely to increase every year.

### Safety Requirements

No safety requirements have been identified.

### Security Requirements

SE-1: All users will be authenticated through their MIT Certificates via Touchstone.



SE-2: Only administrators authorized to create, change and terminate hourly student appointments via the roles database will be allowed access to the Hourly Student Appointment System.

SE-3: The system shall permit student administrators to view positions outside their own department, but not create or change those positions.

### Authorization Requirements

The student administrators, SFS and ODGE approvers will have the same authorizations as the HR-Payroll Service Center Staff who currently process hourly student appointments in order for SAP to process transactions; however, this access will only be available through the web-based application, not directly in the SAP GUI.

### Software Quality Attributes

Availability-1: The Hourly Student Appointment System will be available to users 24/7 on MITNet except during planned outages.

Availability-2: Planned outages for system maintenance will be during periods when users are not active on the system.

### SAP DATA

The following infotypes are currently stored for an hourly paid student. The HSA program will continue to update these infotypes unless it is determined that there is a better solution for storing the data. In addition, requirements in this document may require that we use and/or create other infotypes or tables.

Action Performed by Student Administrator	SAP program or transaction	Fields to save in SAP	Instructions
Create New Position	ZOMCHST	Start Date of Position	Start date for all infotypes
	ZHR_HOURLY_GRAD	Creation of Hourly PERNR for Grad students	SAP creates hourly PERNR for Grad student if it does not exist
		End Date of Position	End date for all infotypes
		Job Title	
		Position Title	
		Position Description	
		Hourly Rate	
		Work Hours	
		Location indicator	
		Time Group	
		Cost Object	

Action Performed by Student Administrator	SAP program or transaction	Fields to save in SAP	Instructions
		Cost Distribution (%)	
		Name Of Supervisor	
		UROP Limit (\$)	UROP appointments only
		UROP Project ID	UROP appointments only
Change Position Attributes	PO13/PA30/ZOMCHST	Effective Date of Change	Effective date of the change in SAP. The transaction used depends on the type of change
	RE_RHBEGDA0	Start Date	Update position with new start date
	PA30	Hourly Rate	Update hourly rate effective date of the change
	PO13	Position Title	Update position title effective date of the change
	P013	Time Group	Update time group effective date of the change
	ZOMCHST	End Date	Update end date to a date later than current end date. If appointment is being extended use ZOMCHST to process all fields
	ZOMCHST	Cost Object	The cost object can be changed only when a position is being extended
	PA30/ZOMCHST	Work Hours	Update work hours effective date of change
Terminate Position	ZOMCHST	End Date	Update End Date of position prior to original end date.

SAP Infotype	Infotype Description	MIT SIS	Hourly Student Appointment System must update
IT0000	Actions	Created by MIT SIS bio-feed when a student is first set-up in SAP	N
IT0001	Organizational Assignment	Created by MIT SIS bio-feed when a student is first set-up in SAP	N
IT0002	Personal Data	Created by MIT SIS bio-feed when a student is first set-up in SAP	N
IT0003	Payroll Status	Created by MIT SIS bio-feed when a student is first set-up in SAP	Updated automatically by SAP
IT0006	Addresses	Created by MIT SIS bio-feed when a student is first set-up in SAP	N
<b>IT0007</b>	<b>Planned Working Time</b>	<b>Created by MIT SIS bio-feed when a student is first set-up in SAP</b>	<b>Y</b> ; project team will determine if OM infotype should be updated as well or instead of IT0007
IT0008	Basic Pay	Created by MIT SIS bio-feed when a student is first set-up in SAP	N
IT0009	Bank Details	Created by MIT SIS bio-feed when a student is first set-up in SAP	N
IT0027	Cost Distribution	Created by MIT SIS bio-feed when a student is first set-up in SAP. It is created for all PERNRS	N
IT0031	Reference Personnel Number	Created by MIT SIS when hourly PERNR is created for a Grad student. In future HSA program will need to create this infotype if it creates the hourly grad pernr.	N
IT0094	Residence Status	Created by MIT SIS bio-feed when a student is first set-up	N

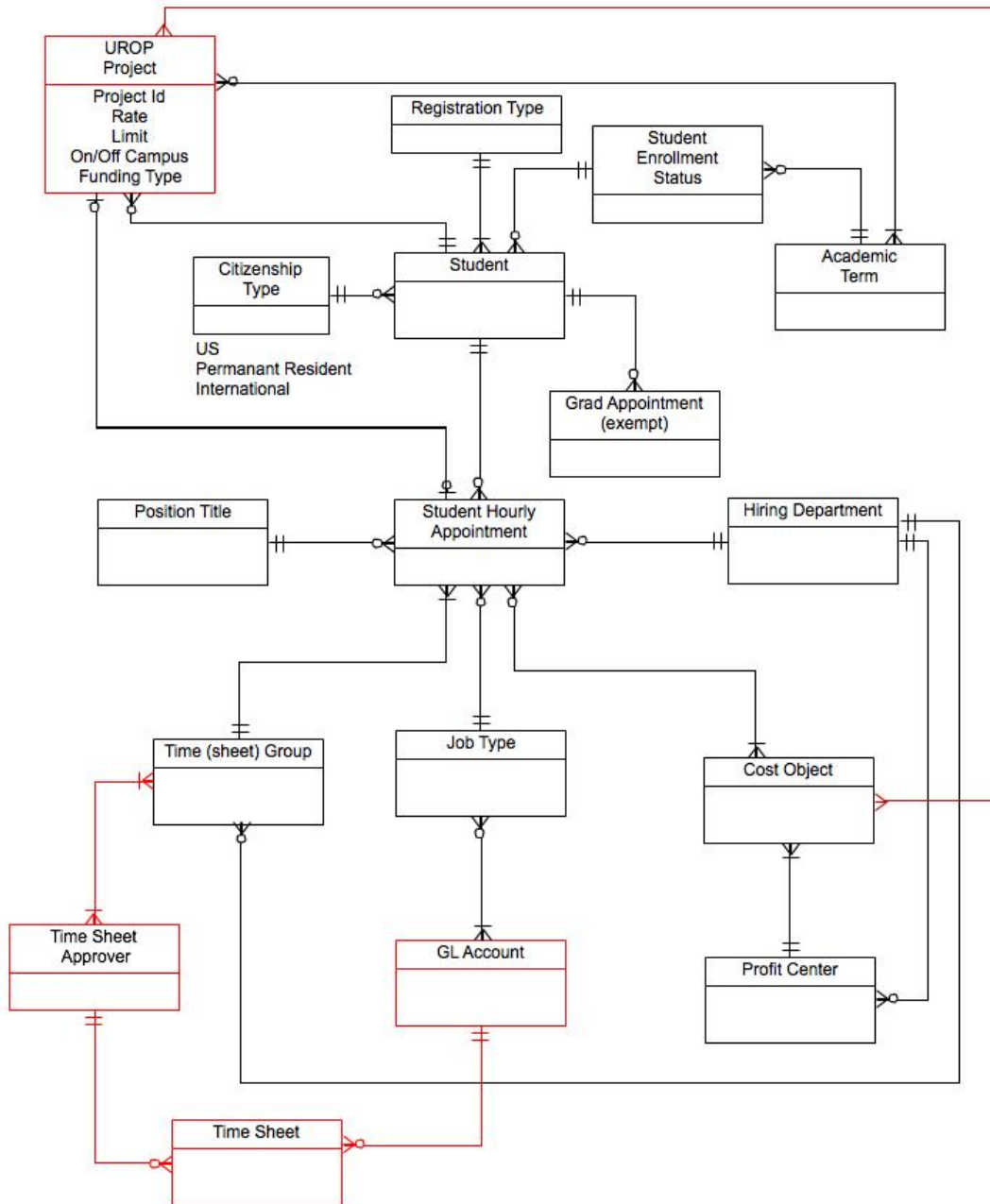
SAP Infotype	Infotype Description	MIT SIS	Hourly Student Appointment System must update
		in SAP	
IT0105	Communication Infotype	Created by MIT SIS bio-feed when a student is first set-up in SAP. Stores the mapping of MIT ID and SAP PERNR	N
IT0207	Residence Tax Area	Created by MIT SIS bio-feed when a student is first set-up in SAP	N
IT0208	Work Tax Area	Created by MIT SIS bio-feed when a student is first set-up in SAP	N
IT0209	Unemployment State	Created by MIT SIS bio-feed when a student is first set-up in SAP	N
IT0210	Withholding Info W4/W5	Created by MIT SIS bio-feed when a student is first set-up in SAP	N
IT0235	Other Taxes-US	Created by MIT SIS bio-feed when a student is first set-up in SAP	N
<b>IT0554</b>	<b>Hourly Rate Assignment</b>	<b>Created/updated when new position is created or changed. End date assigned on termination</b>	<b>Y</b>
<b>IT1018</b>	<b>Cost Distribution Data</b>	<b>Automatically updated when IT9018 is created or changed</b>	<b>Y</b>
<b>IT9018</b>	<b>Student Distribution</b>	<b>Created when new position is created or changed. End date on termination</b>	<b>Y</b>
IT9033	Distribution Status Infotype	Created by MIT SIS bio-feed when a student is first set-up in SAP. It is created for all PERNRS	N
<b>IT1000</b>	<b>Object</b>	<b>Created when new position is created. Updated if</b>	<b>Y</b>

<b>SAP Infotype</b>	<b>Infotype Description</b>	<b>MIT SIS</b>	<b>Hourly Student Appointment System must update</b>
		<b>position title changed. End date on termination</b>	
<b>IT1001</b>	<b>Relationships</b>	<b>Created when new position is created. May be updated for certain changes</b>	<b>Y</b>
<b>IT9105</b>	<b>Add Student Attribute</b>	<b>Created when new UROP position is created and UROP limit is entered</b>	<b>Y</b>

ANALYSIS MODELS

Hourly Student Appointments - Data Model

<https://wikis.mit.edu/confluence/display/DATAADMIN/Hourly+Paid+Student+Model>



## GLOSSARY

DLC	Departments, Labs and Centers
DW	Data warehouse-The data warehouse currently receives nightly feeds of UROP projects from the MITSIS system.
ESDS	Electronic Salary and Distribution System
eSPAF	Electronic Student Personnel Action Form
GRT	Graduate Resident Tutor
ISO	International Students Office
MITSIS	It is the administrative system that supports all of the student services at MIT. It is the system of records for all graduate appointments and awards
ODGE	Office of the Dean for Graduate Education
PERNR	Personnel Number in SAP
PY	Payroll
SFS	Student Financial Services
SRS	Software Requirement Specification
UAAP	Office of Undergraduate Advising and Academic Programming
UROP job	Undergraduate Research Opportunity is a research job held by an undergraduate student. These students can be cross-registered students from other colleges (e.g. Wellesley, Harvard)
UROP system	Undergraduate Research Opportunity System - It is a web-based system where students submit applications for UROP jobs, subsequent to which the UROP staff may approve or reject an application. This information is saved to MITSIS. Approved UROP project data will be sent to SAP daily via an interface. This information will be automatically loaded into the Hourly Student Appointment system in order to create a position
Graduate Appointments and Awards	Graduate students receive financial aid in the form of Research Assistant (RA) appointments, Teaching Assistant (TA) appointments, or Fellowship (FE) Awards
Appointments Vs. Awards	Appointment refers to an RA or TA. Award – refers to a Fellowship; the two terms are often used interchangeably. In this document, appointments will be used to refer to both appointments and awards
Research Assistant (RA) appointment	Graduate student performs research duties in a lab or center. A student who receives a full (100%) RA appointment includes payment of full tuition for the

	period of the appointment. Partial appointments (< 100%) are also possible. RAs can perform research on or off Campus. RAs are paid a salary at the end of each month
Instructor G (IG)	Graduate student assists a member of the faculty in grading undergraduate quizzes and homework, instructing in the classroom and/or laboratory, preparing apparatus for demonstrations, posting web-based materials, and conducting tutorials. A 100% TA appointment pays a salary and full tuition. TAs are paid a salary at the end of each month for the period of the appointment
Fellowship (FE)	An award to a graduate student that covers tuition fully or partially and/or provides a stipend to help defray living expenses. There cannot be any requirement that work is done in exchange for the funding. Fellowship recipients are paid a stipend NOT a salary at the end of each month for the period of the appointment
Academic Year	Graduate appointments and awards must be recorded by academic year. The Institute's academic year begins with the Fall term on September 1 and goes through August of the following year. The academic year for 2008 runs from September 1, 2007 through August 31, 2008. The start and end dates of graduate appointments and awards usually correspond to the start and end dates of the academic terms. For example, a Fall appointment would begin September 1 and end January 15. Appointments can also be granted for a partial term; for example an appointment could begin on September 1 and end on December 15
Financial Year	Graduates financial year begins on June 1st and ends May 31st of the following year
Summer Term	June 1 to August 31
Fall Term	September 1 to January 15
Spring Term	January 16 to May 31

## USE CASES / REQUIREMENTS CROSS REFERENCE

Use Case	Referenced Requirements
<b>UC-1 Verify student eligibility</b>	REQ-1 Search for Student by unique indicator REQ-4 Student eligibility criteria REQ-4.1 Do not allow Grad "Non-Resident" doctoral students REQ-4.2 I-9 on File REQ-4.3 Student's Enrollment Status REQ-4.4 Do not allow "Special" students REQ-5 Verify social security number on file
<b>UC-2 Create Position</b>	REQ-21 Verify if position exists REQ-8 Job Titles from SAP REQ-9 Position Title* REQ-10 Position Description* REQ-11 Location* REQ-12 Department* REQ-13 Time Group*

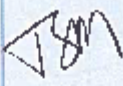







	<p>REQ-14 Cost Object Validations*</p> <p>REQ-14.1 Cost Object Expiration Message</p> <p>REQ-14.2 Cost Object Allocation</p> <p>REQ-14.3 Number of cost Objects</p> <p>REQ-15 Hourly Rate*</p> <p>REQ-15.3 Hourly Rate allowed</p> <p>REQ-16 Work Hours*</p> <p>REQ-16.1 UnderGrad Students</p> <p>REQ-16.2 Grad Students</p> <p>REQ-7 Auto populate approved UROP projects</p> <p>REQ-15.1 Hourly rate&lt;Min rate not allowed</p> <p>REQ-15.2 Hourly Rate&gt;\$25/hr</p> <p>REQ-27 Overrides</p> <p>REQ-30 UROP Limit Report</p>
<b>UC-3 Submit to SAP - no routing required</b>	<p>REQ-17 Comment Box for Student Administrator</p> <p>REQ-19 Email Notification</p> <p>REQ-19.1 Email Content</p> <p>REQ-19.2 Email Notification Page</p> <p>REQ-24 Create hourly grad pennr</p> <p>REQ-25 Verify if student's personnel record is locked</p> <p>REQ-28 SAP errors</p>
<b>UC-4 Route for Approval</b>	<p>REQ-26 Approval Routing order</p> <p>REQ-18 Comment Box for ODGE</p> <p>REQ-19 Email Notification</p> <p>REQ-19.1 Email Content</p> <p>REQ-19.2 Email Notification Page</p> <p>REQ-24 Create hourly grad pennr</p> <p>REQ-25 Verify if student's personnel record is locked</p> <p>REQ-28 SAP errors</p>
<b>UC-5 Change Position Attributes</b>	<p>REQ-20 Effective Date of the Change*</p> <p>REQ-4 Student eligibility criteria</p> <p>REQ-2 Start Date*</p> <p>REQ-22 Extend Position</p> <p>REQ-9 Position Title*</p> <p>REQ-1 Search for Student by unique indicator</p> <p>REQ-23 Change Position Attributes- Editable Fields</p> <p>REQ-29 Show ALL active positions</p> <p>REQ-29.1 Position Information</p> <p>REQ-22.1 UROP Position</p> <p>REQ-22.2 Non-UROP Position</p> <p>REQ-4.1 Do not allow Grad "Non-Resident" doctoral students</p> <p>REQ-4.3 Student's Enrollment Status</p> <p>REQ-13 Time Group*</p> <p>REQ-16.2 Grad Students</p> <p>REQ-15 Hourly Rate*</p> <p>REQ-15.1 Hourly rate&lt;Min rate not allowed</p> <p>REQ-15.2 Hourly Rate&gt;\$25/hr</p> <p>REQ-15.3 Hourly Rate allowed</p> <p>REQ-27 Overrides</p> <p>REQ-5 Verify social security number on file</p>
<b>UC-6 Terminate Position</b>	<p>REQ-5 Verify social security number on file</p> <p>REQ-19 Email Notification</p> <p>REQ-19.1 Email Content</p>

## REQUIREMENTS / USE CASE CROSS REFERENCE

Requirement	Referenced Use Cases
<b>REQ-1 Search for Student by unique indicator</b>	UC-5 Change Position Attributes UC-1 Verify student eligibility
<b>REQ-2 Start Date*</b>	UC-5 Change Position Attributes UC-1 Verify student eligibility
<b>REQ-3 End Date*</b>	UC-1 Verify student eligibility
<b>REQ-4 Student eligibility criteria</b>	UC-5 Change Position Attributes UC-1 Verify student eligibility
<b>REQ-4.1 Do not allow Grad "Non-Resident" doctoral students</b>	UC-5 Change Position Attributes UC-1 Verify student eligibility
<b>REQ-4.2 I-9 on File</b>	UC-1 Verify student eligibility
<b>REQ-4.3 Student's Enrollment Status</b>	UC-5 Change Position Attributes UC-1 Verify student eligibility
<b>REQ-4.4 Do not allow "Special" students</b>	UC-1 Verify student eligibility
<b>REQ-5 Verify social security number on file</b>	UC-1 Verify student eligibility UC-6 Terminate Position UC-5 Change Position Attributes
<b>REQ-6 Duplicate Positions not allowed</b>	UC-3 Submit to SAP - no routing required
<b>REQ-7 Auto populate approved UROP projects</b>	UC-2 Create Position
<b>REQ-8 Job Titles from SAP</b>	UC-2 Create Position
<b>REQ-9 Position Title*</b>	UC-2 Create Position UC-5 Change Position Attributes
<b>REQ-10 Position Description*</b>	UC-2 Create Position
<b>REQ-11 Location*</b>	UC-2 Create Position
<b>REQ-12 Department*</b>	UC-2 Create Position
<b>REQ-13 Time Group*</b>	UC-2 Create Position UC-5 Change Position Attributes
<b>REQ-14 Cost Object Validations*</b>	UC-2 Create Position
<b>REQ-14.1 Cost Object Expiration Message</b>	UC-2 Create Position
<b>REQ-14.2 Cost Object Allocation</b>	UC-2 Create Position
<b>REQ-14.3 Number of cost Objects</b>	UC-2 Create Position
<b>REQ-15 Hourly Rate*</b>	UC-2 Create Position UC-5 Change Position Attributes
<b>REQ-15.1 Hourly rate&lt;Min rate not allowed</b>	UC-2 Create Position UC-5 Change Position Attributes
<b>REQ-15.2 Hourly Rate&gt;\$25/hr</b>	UC-5 Change Position Attributes UC-2 Create Position
<b>REQ-15.3 Hourly Rate allowed</b>	UC-5 Change Position Attributes UC-2 Create Position
<b>REQ-16 Work Hours*</b>	UC-2 Create Position UC-5 Change Position Attributes
<b>REQ-16.1 UnderGrad Students</b>	UC-2 Create Position UC-5 Change Position Attributes
<b>REQ-16.2 Grad Students</b>	UC-2 Create Position UC-5 Change Position Attributes
<b>REQ-17 Comment Box for Student Administrator</b>	UC-3 Submit to SAP - no routing required
<b>REQ-18 Comment Box for Approvers</b>	UC-4 Route for Approval
<b>REQ-19 Email Notification</b>	UC-3 Submit to SAP - no routing required UC-4 Route for Approval UC-6 Terminate Position

<b>REQ-19.1 Email Content</b>	UC-3 Submit to SAP - no routing required UC-4 Route for Approval UC-6 Terminate Position
<b>REQ-19.2 Email Notification Page</b>	UC-3 Submit to SAP - no routing required UC-4 Route for Approval UC-6 Terminate Position
<b>REQ-20 Effective Date of the Change*</b>	UC-5 Change Position Attributes
<b>REQ-21 Verify if position exists</b>	UC-2 Create Position UC-3 Submit to SAP - no routing required
<b>REQ-22 Extend Position</b>	UC-5 Change Position Attributes
<b>REQ-22.1 UROP Position</b>	UC-5 Change Position Attributes
<b>REQ-22.2 Non-UROP Position</b>	UC-5 Change Position Attributes
<b>REQ-23 Change Position Attributes- Editable Fields</b>	UC-5 Change Position Attributes
<b>REQ-24 Create hourly grad pennr</b>	UC-3 Submit to SAP - no routing required UC-4 Route for Approval
<b>REQ-25 Verify if student's personnel record is locked</b>	UC-3 Submit to SAP - no routing required UC-4 Route for Approval
<b>REQ-26 Approval Routing order</b>	UC-4 Route for Approval
<b>REQ-27 Overrides</b>	UC-2 Create Position, UC-5 Change Position Attributes
<b>REQ-28 SAP errors</b>	UC-3 Submit to SAP - no routing required UC-4 Route for Approval
<b>REQ-29 Show ALL active positions</b>	UC-5 Change Position Attributes
<b>REQ-29.1 Position Information</b>	UC-5 Change Position Attributes
<b>REQ-30 UROP Limit Report</b>	UC-2 Create Position

Name Of Approver	Date Approved	Initials	Comments
Tricia Sullivan-Mullen <i>SAP Business Systems Manager, VPF</i>	4-14-11		
Douglas J Le Vie <i>Manager, HR-Payroll Service Delivery, HR- Payroll Service Center</i>	4-14-11		
Leslie A Wright <i>Business Analyst, Financial Operations, VPF</i>	4-14-11		
Gary Ryan <i>Asst. Director, Student Financial Aid and Employment, SFS</i>	4/14/11		
Melissa Martin-Greene <i>Program Coordinators, UROP, UAAP</i>	4/14/11		
Michael DiPalma <i>Financial Assistant II, ODGE</i>	4/14/11		

## CHANGES TO REQUIREMENTS AFTER SIGN-OFF

The following changes were made to requirements specifications subsequent to user interviews during the Design phase.

1. UROP Position Title- REQ-9, will be defaulted but be editable by the student administrator
2. UROP Position Description- REQ-10, will be defaulted but be editable by the student administrator
3. REQ-11, Job Address will be the building and/or room # for UROP projects.
4. Grad Students- REQ-16.2, requirement description has been updated
5. Email Notifications- REQ-19, requirement description has been updated
6. View Transaction- REQ-31, requirement description has been updated
7. Student's Active Appointments- REQ-32, new requirement added
8. Overrides- REQ-27, When creating an appointment if international student has >20 planned hours and start date is in the past, request will be routed to SFS if undergraduate, ODGE if graduate.
9. Cancel Appointment- REQ - 33