



**DIREKTORAT JENDERAL KELEMBAGAAN, ILMU PENGETAHUAN,
TEKNOLOGI DAN PENDIDIKAN TINGGI
KEMENTERIAN RISET, TEKNOLOGI DAN PENDIDIKAN TINGGI**

KATA PENGANTAR

Direktorat Jenderal Kelembagaan, Ilmu Pengetahuan, Teknologi, dan Pendidikan Tinggi (Ditjen Kelembagaan IPTEK dan DIKTI) Kementerian Riset, Teknologi dan Pendidikan Tinggi dalam mendukung upaya meningkatkan daya saing bangsa melalui peningkatan kualitas pendidikan tinggi telah mengupayakan berbagai inisiatif dan program. Inisiatif dan program dimaksud tidak hanya ditujukan bagi Perguruan Tinggi Negeri (PTN), tetapi juga bagi Perguruan Tinggi Swasta (PTS). Keberadaan PTS salah satunya adalah membantu upaya peningkatan akses serta menaikkan Angka Partisipasi Kasar (APK) pendidikan tinggi. Kontribusi PTS tersebut masih perlu ditingkatkan menuju perbaikan kualitas yang lebih baik. Salah satu program yang khusus ditargetkan bagi PTS adalah Program Pembinaan Perguruan Tinggi Swasta (PP-PTS). Program ini merupakan kelanjutan dan perbaikan dari Program Hibah Kompetitif Percepatan Mutu Perguruan Tinggi Swasta Sehat yang telah dilaksanakan oleh Direktorat Kelembagaan dan Kerjasama, Ditjen Dikti Kemdikbud sejak Tahun Anggaran 2008 dan juga merupakan kelanjutan dan penyempurnaan dari PHP-PTS tahun 2010-2014 dan PP-PTS tahun 2015. Pada PP-PTS tahun 2016 Ditjen Kelembagaan IPTEK dan DIKTI merupakan pelaksana pengadaan dan penyerahan barang kepada Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi (Yayasan/Perserikatan/Perkumpulan) untuk dimanfaatkan oleh PTS dalam rangka meningkatkan kualitas pembelajaran. Dalam jangka panjang, PP-PTS diharapkan akan membantu pengembangan kualitas PTS dan akan mendorong setiap institusi untuk menyusun rencana program pengembangan untuk peningkatan kualitas PTS berdasarkan pada analisis kebutuhan yang didukung informasi yang akurat, mengacu ke masa depan, dengan memberdayakan setiap jurusan/program studi beserta sumberdayanya sebagai upaya menuju PTS yang lebih sehat. Dengan demikian melalui PP-PTS ini mutu PTS dapat terus ditingkatkan.

Saya sangat mengharapkan Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi untuk berpartisipasi aktif dalam PP-PTS ini. Akhirnya, disampaikan ucapan terima kasih dan penghargaan kepada tim yang telah menyusun dan merumuskan panduan penyusunan proposal ini dengan memperhatikan dan mempertimbangkan kendala-kendala dan temuan-temuan pada implementasi tahun-tahun sebelumnya serta masukan dari pemangku kebijakan terkait.

Jakarta, April 2016
Direktur Jenderal Kelembagaan, Ilmu
Pengetahuan, Teknologi, dan Pendidikan Tinggi
Kementerian Riset, Teknologi dan Pendidikan
Tinggi

ttd

Patdono Suwignyo
NIP.195810071986011001

DAFTAR ISI

Kata Pengantar	i
Daftar Isi	ii
I. Latar Belakang	1
II. Tujuan Umum dan Deskripsi Program	1
A. Tujuan Umum Program	1
B. Sasaran	1
C. Deskripsi Program	2
III. Besaran Dana PP PTS	2
A. Pagu Dana	2
B. Penggunaan Dana	3
IV. Persyaratan Umum Institusi Pengusul	4
V. Seleksi Dan Kriteria Seleksi Proposal	5
A. Seleksi Proposal	6
B. Proses Seleksi Proposal	6
C. Kriteria Seleksi Proposal	7
VI. Format Proposal	7
VII. Administrasi Proposal	12
Lampiran-lampiran:	
A. Administrasi Proposal	13
B. Format Profil Perguruan Tinggi	15
C. Daftar Peralatan yang Dapat Diusulkan	22

I. LATAR BELAKANG

Saat ini, Kementerian Riset, Teknologi dan Pendidikan Tinggi mengelola sekitar 3.655 institusi yang berbentuk Universitas, Institut, Sekolah Tinggi, Politeknik, dan Akademi, baik yang diselenggarakan oleh Pemerintah maupun oleh masyarakat. Dalam rangka peningkatan kapasitas institusi, pada tahun 2016 Direktorat Jenderal Kelembagaan Ilmu Pengetahuan, Teknologi, dan Pendidikan Tinggi mengadakan Program Pembinaan Perguruan Tinggi Swasta (PP-PTS) yang diberikan kepada PTS di seluruh Indonesia melalui Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi. Program pembinaan ini diberikan berdasarkan pada evaluasi atas rencana dan kebutuhan masing-masing PTS yang diwujudkan dalam bentuk proposal. Proposal diusulkan oleh Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi.

Bantuan diberikan kepada pengusul untuk digunakan oleh PTS yang diusulkan dalam proposalnya. PP-PTS tahun 2016 merupakan kelanjutan dan perbaikan dari Program Hibah Kompetitif Percepatan Mutu Perguruan Tinggi Swasta Sehat yang telah dilaksanakan oleh Direktorat Kelembagaan DIKTI sejak Tahun Anggaran 2008 dan juga merupakan keberlanjutan dan penyempurnaan dari PHP-PTS tahun 2010-2014 dan PP-PTS tahun 2015.

Pada tahun 2016 Direktorat Jenderal Kelembagaan Ilmu Pengetahuan, Teknologi, dan Pendidikan Tinggi akan berperan sebagai penanggung jawab dan pelaksana PP-PTS. Ditjen Kelembagaan IPTEK dan Dikti melakukan seleksi proposal untuk memberikan bantuan kepada Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi berupa barang dan/atau pembangunan gedung untuk dimanfaatkan oleh PTS penerima.

II. TUJUAN UMUM DAN DESKRIPSI PROGRAM

A. Tujuan Umum Program

PP-PTS Tahun 2016 merupakan program bantuan pengembangan institusi yang ditujukan untuk meningkatkan mutu pembelajaran melalui perbaikan proses pembelajaran, sehingga dapat meningkatkan kinerja perguruan tinggi swasta.

B. Sasaran

Perguruan Tinggi Swasta di bawah binaan Kementerian Riset, Teknologi dan Pendidikan Tinggi yang memenuhi persyaratan yang ditentukan oleh Kementerian Riset, Teknologi dan Pendidikan Tinggi. Perguruan tinggi swasta yang dapat menerima bantuan ini adalah PTS yang berada pada kluster 4 dan 5 sesuai Surat Keputusan Menteri Riset Teknologi dan Pendidikan Tinggi No.492.a/M/KP/VIII/2015.

C. DESKRIPSI PROGRAM

Program Pembinaan PTS (PP-PTS) 2016 bersifat bantuan dan merupakan salah satu program pada Ditjen Kelembagaan IPTEK dan DIKTI Kementerian Riset, Teknologi dan Pendidikan Tinggi. Program PP-PTS mencakup semua PTS yang memenuhi persyaratan yang ditentukan oleh Kementerian Riset, Teknologi dan Pendidikan Tinggi. Pada PP-PTS 2016, pengusul proposal adalah Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi. Seleksi dan pelaksanaan kegiatan PP-PTS dilakukan oleh Ditjen Kelembagaan IPTEK dan DIKTI.

Ditjen Kelembagaan IPTEK dan DIKTI merupakan pelaksana pengadaan dan penyerahan barang kepada Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi untuk dimanfaatkan oleh PTS yang diusulkan dalam proposalnya. Pembangunan gedung baru akan dilakukan oleh pihak ketiga berdasarkan kontrak antara Ditjen Kelembagaan IPTEK dan DIKTI dengan Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi sesuai dengan peraturan yang berlaku. Pemantauan dan evaluasi akan dilakukan oleh Direktorat Jenderal Kelembagaan Ilmu Pengetahuan, Teknologi, dan Pendidikan Tinggi dengan melibatkan pihak Inspektorat Jenderal Kementerian Riset, Teknologi dan Pendidikan Tinggi. Pengalokasian anggaran untuk setiap PTS akan dilakukan oleh Direktorat Jenderal Kelembagaan Ilmu Pengetahuan, Teknologi, dan Pendidikan Tinggi.

Program ini bertujuan memfasilitasi dan mendorong perguruan tinggi swasta untuk meningkatkan mutu pembelajaran. Secara khusus PP-PTS ditujukan untuk peningkatan mutu pembelajaran melalui pemanfaatan sumber daya secara hemat dan bertanggung-jawab. Beberapa peningkatan yang diharapkan adalah peningkatan kualitas proses akademik melalui penyelesaian program akademik yang tepat waktu, masa studi yang sesuai dengan kurikulum, pengurangan jumlah drop-out, atmosfer akademik yang kondusif terutama interaksi dosen dan mahasiswa, optimalisasi pemanfaatan sumberdaya, baik yang menyangkut sumberdaya manusia, rasio dosen mahasiswa, sumberdaya fisik (tingkat utilisasi ruangan dan peralatan), sumberdaya uang (penekanan unit cost), dan sebagainya.

III. BESARAN DANA PP-PTS

Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi mengajukan proposal sesuai dengan **kebutuhan, kapasitas** dan **kondisi** PTS yang **didasarkan pada rencana pengembangan PTS**. Untuk PP-PTS ini, **satu proposal hanya berisi usulan untuk satu PTS**.

Anggaran yang diajukan dalam proposal harus didasari pertimbangan yang kuat serta mencerminkan **kebutuhan** dan **kemampuan** institusi untuk mengelolanya dengan penuh tanggung jawab.

A. Pagu Dana

Besarnya pagu dana maksimum ditetapkan berdasarkan jenis institusi, sebagai berikut:

1. Universitas : Rp. 1 miliar
2. Institut : Rp. 1 miliar
3. Politeknik : Rp. 900 juta
4. Sekolah Tinggi : Rp. 750 juta
5. Akademi : Rp. 600 juta

B. Penggunaan Dana

Bantuan PP-PTS 2016 diberikan dalam bentuk:

1) Barang yang berupa peralatan pendidikan, peralatan laboratorium, furnitur, peralatan pendukung dan 2) pembangunan gedung baru yang terkait dengan peningkatan kualitas proses pembelajaran. Anggaran yang diajukan dalam proposal harus didasari pertimbangan yang kuat serta mencerminkan **kebutuhan** dan **kemampuan** institusi untuk mengelolanya dengan penuh tanggung jawab. **Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi maupun PTS yang diusulkan harus menyediakan fasilitas termasuk ruang yang memadai dan layak untuk pemanfaatan barang yang akan diterima.**

1. Bantuan PP-PTS dalam bentuk barang

Usulan belanja barang harus memenuhi ketentuan sebagai berikut:

- a. Barang yang diusulkan hanya barang yang tersedia dalam daftar barang yang disajikan dalam **Lampiran** pada Panduan Penyusunan Proposal ini;
- b. Usulan pengadaan barang harus dilengkapi dengan rincian barang, jumlah unit, Rencana Anggaran Biaya (RAB), dan spesifikasi teknis;
- c. RAB harus dilengkapi data dukung yang dapat dipertanggung jawabkan atau harga pasar dan brosur-brosur;
- d. Usulan disusun sesuai dengan paket masing-masing.
- e. **PTS yang diusulkan oleh Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi harus memiliki fasilitas termasuk ruang yang memadai dan layak untuk pemanfaatan barang yang akan diterima**
- f. Barang yang diusulkan harus sesuai dengan rencana kegiatan belajar mengajar sesuai dengan program pengembangan yang disampaikan pada proposal.

Barang yang dapat diusulkan terdiri dari:

- i. Peralatan laboratorium dasar bersama: dapat mencakup Laboratorium Fisika, Laboratorium Kimia, Laboratorium Biologi, Laboratorium Komputer umum dan teknik, dan Laboratorium Bahasa. Usulan barang harus relevan dengan pembelajaran pada prodi yang ditingkatkan mutunya dan bukan untuk mendukung proses pembelajaran S2, S3, Profesi dan penelitian dosen;
- ii. Peralatan pendidikan dan TIK: Relevan dengan peningkatan mutu proses belajar mengajar;

- iii. Furnitur untuk di ruang kuliah, laboratorium dan/atau perpustakaan: Furnitur kelas, laboratorium, perpustakaan, dan ruang dosen, tetapi tidak untuk ruang pimpinan perguruan tinggi; dan/atau
- iv. Peralatan pendukung untuk mendukung pelaksanaan pembelajaran dan/atau praktikum antara lain pendingin ruang kelas/laboratorium dan generator listrik (termasuk instalasi standar pabrik/distributor) dan jenis lain seperti pada lampiran.

2. Pembangunan Gedung Baru

Bantuan PP-PTS dapat digunakan untuk membangun gedung baru yang terkait dengan peningkatan kualitas pembelajaran. Pelaksanaan pembangunan gedung baru, harus mengikuti ketentuan berikut:

- i. Gedung/Bangunan yang akan dibangun dengan dana bantuan PP-PTS harus terletak diatas lahan milik sendiri (milik Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi) yang telah bersertifikat;
- ii. Pembangunan gedung baru hanya boleh untuk pembangunan ruang kelas/laboratorium/perpustakaan pada PTS penerima; dan
- iii. Usulan pembangunan gedung harus dilengkapi dengan dokumen perencanaan, spesifikasi, RAB dan rencana jadwal pelaksanaan.
- iv. Pembangunan Gedung harus ada Ijin Mendirikan Bangunan (IMB) dan biayanya dibebankan pada Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi
- v. Pembangunan Gedung dalam pelaksanaannya agar efektif dan efisien harus dibentuk pengelola pembangunan gedung yang sekurang-kurangnya terdiri dari orang yang mempunyai tanggung jawab dan wewenang untuk menguji tagihan, memerintahkan pembayaran dan melaksanakan pembayaran dan ditetapkan dalam Surat Keputusan Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi.

Dana bantuan pembangunan gedung tidak boleh digunakan untuk:

- 1) Membiayai kegiatan lain selain pembangunan gedung yang disetujui;
- 2) Dipinjamkan kepada siapapun dengan alasan apapun;
- 3) Disimpan di bank dalam jangka waktu tertentu dengan tujuan memperoleh keuntungan;
- 4) Memberikan sumbangan, uang tanda terima kasih, uang balas jasa, uang komisi, dan sejenisnya kepada pihak manapun, baik di tingkat kementerian maupun aparat pemerintah Provinsi, Kabupaten/Kota, dan masyarakat lainnya.

IV. PERSYARATAN INSTITUSI PENGUSUL

Penerima bantuan ini adalah Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi. Persyaratan kelayakan Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi yang dapat mengajukan proposal adalah sebagai berikut:

- a. Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi dapat mengajukan proposal PP-PTS apabila Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi

- telah disahkan oleh kementerian yang menangani urusan pemerintahan dibidang hukum dan hak asasi manusia;
- b. Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi dapat mengusulkan proposal hanya bagi PTS yang memenuhi persyaratan:
 - i. PTS berstatus aktif yang berada pada *Cluster* 4 dan 5 sesuai dengan Surat Keputusan Menteri Riset Teknologi dan Pendidikan Tinggi No.492.a/M/Kp/VIII/2015 tentang Klasifikasi dan Pemeringkatan Perguruan Tinggi di Indonesia Tahun 2015 dan diprioritaskan untuk PTS yang berada diwilayah 3T (Terdepan; Terluar; Tertinggal);
 - ii. Akreditasi program studi yang diusulkan masih berlaku;
 - iii. Telah melakukan pelaporan data kegiatan belajar mengajar melalui Pangkalan Data Pendidikan Tinggi dengan persentase 100% untuk TA 2014-2 dan 2015-1;
 - iv. Tidak sedang dikenakan sanksi oleh Ditjen Kelembagaan IPTEK dan DIKTI (Permenristekdikti No. 50 tahun 2015);
 - v. Tidak sedang dalam proses pengajuan perubahan bentuk perguruan tinggi dan perubahan badan hukum; dan
 - vi. Tidak sedang memiliki masalah internal dan tidak dalam sengketa hukum.

V. SELEKSI DAN KRITERIA SELEKSI PROPOSAL

A. Seleksi Proposal

Proposal diusulkan oleh Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi. Setiap proposal berisi usulan untuk 1 (satu) PTS yang berada di bawah Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi. Evaluasi proposal dititikberatkan pada persyaratan administrasi dan **kemampuan dalam mengaitkan antara program pengembangan yang direncanakan dengan kebutuhan pembiayaan**. Mekanisme seleksi proposal dilakukan secara akuntabel, objektif, dan transparan.

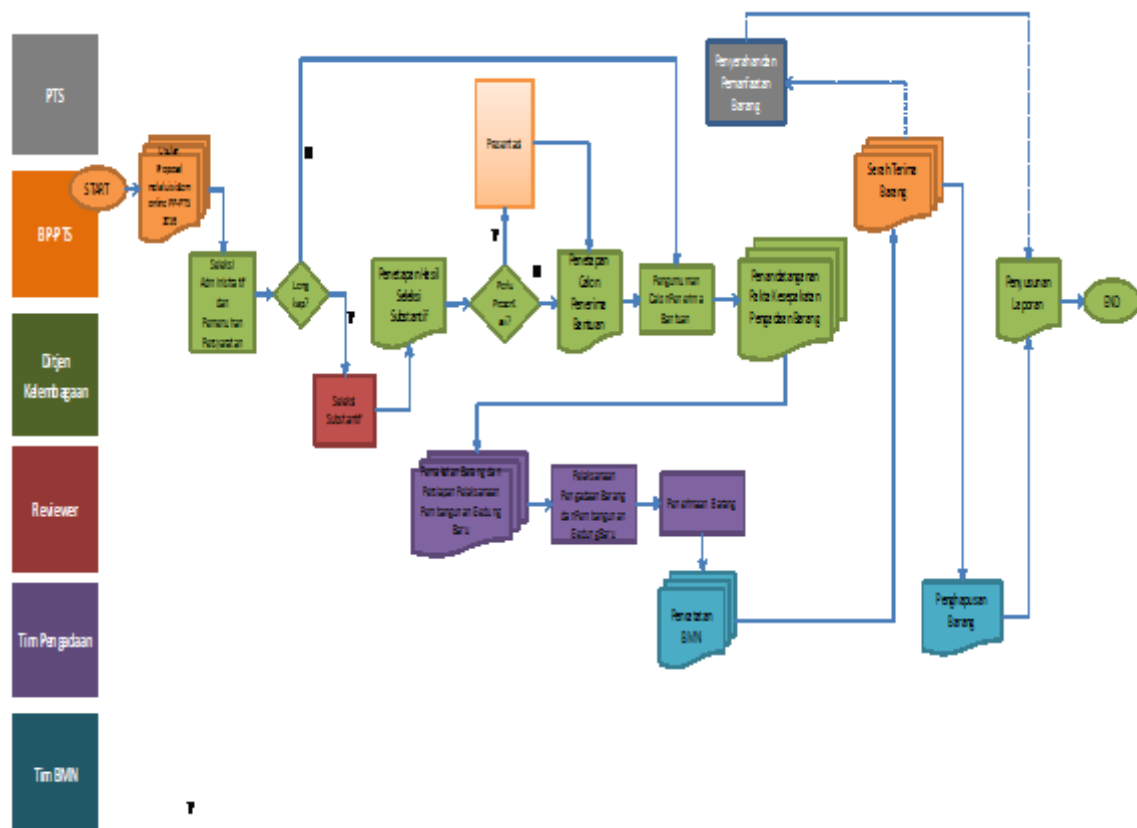
Alur pengusulan PP-PTS disajikan pada Gambar 1. Proposal disampaikan secara *on line* oleh Badan Hukum Nirlaba Penyelenggara Perguruan Tinggi melalui *website* <http://pppts.ristekdikti.go.id>. Proses seleksi akan dilakukan dalam tahapan: (1) Seleksi Administratif dilakukan oleh Direktorat Pembinaan Kelembagaan Perguruan Tinggi, (2) Seleksi Substantif dilakukan oleh *reviewer* independen, (3) Presentasi untuk evaluasi kelayakan program, finalisasi program dan anggaran.

Evaluasi proposal menilai aspek persyaratan administrasi dan kemampuan pengusul dalam mengaitkan antara program pengembangan yang direncanakan dengan kebutuhan barang dan bangunan.

B. Proses Seleksi Proposal

Seleksi proposal dilakukan dalam tahapan berikut.

1. Evaluasi administratif terhadap pemenuhan persyaratan dilakukan oleh Direktorat Pembinaan Kelembagaan Perguruan Tinggi ;
2. Evaluasi substantif dilakukan oleh reviewer independen. Satu proposal dinilai oleh dua orang reviewer yang ditunjuk. Reviewer juga menelaah proposal pada aspek program, kesesuaian jenis barang dan pembangunan gedung dengan kebutuhan pembelajaran pada program studi yang diusulkan. Evaluasi juga memperhatikan kapasitas PTS dalam rencana pengelolaan dan pemanfaatan bantuan yang diterima;
3. Presentasi: Pengusul yang lolos tahap evaluasi substantif akan diminta untuk mempresentasikan usulannya. Pada tahap ini akan dilakukan juga evaluasi kelayakan program, finalisasi usulan kebutuhan dan anggaran.



Gambar 1. Alur pengusulan PP-PTS 2016

C. Kriteria Seleksi Proposal

Proposal yang memenuhi persyaratan administrasi sesuai dengan persyaratan umum institusi pengusul, akan diseleksi berdasarkan kriteria berikut:

KELENGKAPAN PROFIL PERGURUAN TINGGI (30%)

Penilaian dilakukan terhadap analisis dan kelengkapan data-data yang menunjukkan profil perguruan tinggi seperti profil mahasiswa, profil lulusan, profil SDM, profil sarana dan prasarana. Penilaian juga dilakukan terhadap analisis dari perspektif badan hukum nirlaba penyelenggara perguruan tinggi dalam penetapan program studi yang diusulkan untuk ditingkatkan mutunya.

RENCANA PENGEMBANGAN STRATEGIS PERGURUAN TINGGI (20%)

Penilaian dilakukan terhadap kelengkapan dan kejelasan arah pengembangan institusi yang dinyatakan dalam pernyataan visi, misi dan tujuan institusi, serta program strategis serta indikator yang akan dicapai.

PROGRAM PENINGKATAN KUALITAS PENDIDIKAN (50%)

Penilaian dilakukan terhadap keterkaitan program pengembangan dengan program strategis, target indikator yang akan dicapai, kesesuaian antara program pengembangan dengan usulan pengadaan dan pembangunan gedung sertakelengkapan spesifikasi usulan pengadaan barang dan pembangunan gedung.

VI. FORMAT PROPOSAL

Proposal yang disampaikan oleh badan hukum nirlaba penyelenggara perguruan tinggi berisi usulan untuk satu PTS. Proposal ditulis dalam **Bahasa Indonesia yang baik dan benar**, menggunakan font **Times New Roman** 12 point, dan spasi tunggal. Penulisan Proposal harus mengikuti struktur dan format berikut:

1. Halaman judul/cover

Memuat informasi tentang nama institusi, seperti contoh pada **Lampiran A**.

2. Halaman identifikasi dan pengesahan

Halaman ini berisi informasi ringkas tentang nama dan alamat lengkap badan hukum nirlaba penyelenggara perguruan tinggi dan PTS, nama dan alamat e-mail Ketua Pelaksana program di tingkat institusi, seperti contoh pada **Lampiran A**.

3. Daftar isi

4. Ringkasan eksekutif (maksimum 1 halaman)

Memuat intisari Proposal, khususnya program peningkatan kualitas pendidikan dan keterkaitannya dengan usulan pengadaan dan pembangunan gedung yang disampaikan.

5. Bab 1: Profil Perguruan Tinggi

Bagian ini memuat informasi mengenai profil perguruan tinggi antara lain profil mahasiswa, profil lulusan, profil SDM, profil sarana dan prasarana, serta kegiatan pendidikan dan hasilnya yang dinyatakan dalam indikator kinerja. Lakukanlah analisis seperlunya sesuai dengan data-data pada profil tersebut. Untuk menggambarkan profil perguruan tinggi dapat digunakan format pada **Lampiran B**.

Berdasarkan profil PT, Badan hukum nirlaba penyelenggara perguruan tinggi menguraikan analisis dari perspektif badan hukum dalam menetapkan prodi yang diusulkan untuk ditingkatkan kualitasnya.

6. Bab 2: Rencana Strategis Pengembangan Perguruan Tinggi

Bagian ini memuat informasi ringkas tentang rencana strategis pengembangan institusi yang saat ini dijalankan dan dijadikan landasan untuk penyusunan rencana program pengembangan. Informasi dimaksud paling tidak memuat jangka waktu renstra, visi dan misi institusi, strategi utama dan program pengembangan yang telah ditetapkan serta indikator kinerja untuk mengukur ketercapaian renstra.

7. Bab 3: Program Pengembangan Peningkatan Kualitas Pendidikan

Bagian ini berisi program pengembangan untuk peningkatan kualitas pendidikan yang direncanakan oleh perguruan tinggi **selama 2 tahun ke depan**. Pada bab ini juga harus digambarkan rencana pemanfaatan barang dan gedung yang diusulkan untuk peningkatan kualitas pendidikan. Program studi yang menjadi sasaran peningkatan kualitas pendidikan harus disampaikan secara jelas. Indikator kinerja yang akan dicapai dalam 3 tahun ke depan harus disajikan pada Tabel 1 berikut ini.

Tabel 1. Nilai baseline indikator kinerja dan targetnya

Indikator Kinerja	Baseline tahun 2015	Target tahun 2016	Target tahun 2017
Status Akreditasi institusi			
Prodi dengan akreditasi A per total prodi			
Prodi dengan akreditasi B per total prodi			
Rata-rata Lama Studi Lulusan:			
Tingkat PT			
Prodi A			
Prodi B			
Dst (sesuai dengan prodi yang menjadi sasaran kegiatan)			
Rasio jumlah lulusan terhadap input			
Tingkat PT			
Prodi A			
Prodi B			
Dst (sesuai dengan prodi yang menjadi sasaran kegiatan)			
Rata-rata IPK Lulusan:			
Tingkat PT			
Prodi A			

Indikator Kinerja	Baseline tahun 2015	Target tahun 2016	Target tahun 2017
Prodi B Dst (sesuai dengan prodi yang menjadi sasaran kegiatan)			
Rata-rata penyelesaian tugas akhir: Tingkat PT Prodi A Prodi B Dst (sesuai dengan prodi yang menjadi sasaran kegiatan)			

8. Bab 4: Usulan Belanja Barang, Pembangunan Gedung dan Rencana Anggaran Biaya

Bab ini berisi usulan belanja barang, pembangunan gedung dan Rencana Anggaran Biaya (RAB). Usulan belanja barang dan pembangunan gedung harus disusun sesuai dengan format seperti tertera pada tabel-tabel di bawah ini. Barang yang dapat diusulkan pada proposal ini hanya barang yang disajikan pada **Lampiran C** pada panduan ini.

RAB merupakan usulan anggaran total institusi yang didasarkan atas usulan anggaran untuk belanja barang dan pembangunan gedung yang disajikan dalam format pada Tabel 7.

Tabel 2. Spesifikasi Rinci untuk Peralatan Laboratorium Matematika/Kimia/Biologi/Fisika/Bahasa/Komputer Teknik Tahun 2016

Nama Peralatan Laboratorium *)	Spesifikasi Teknis	Jumlah	Harga Satuan	Perkiraan Biaya (ribuan rupiah)	Laboratorium Terkait
1. ...					
2. ...					
n. ...					
Total					

*) Gunakan format terpisah untuk setiap usulan kelompok peralatan laboratorium

Tabel 3. Spesifikasi Rinci untuk Peralatan Pendidikan dan TIK Tahun 2016

Nama Peralatan	Spesifikasi Teknis	Jumlah	Harga Satuan (ribuan rupiah)	Perkiraan Biaya (ribuan rupiah)	Peruntukan ^{*)}
1. ...					
2. ...					
n. ...					
Total					

^{*)}Diisi dengan nama laboratorium, pembelajaran di kelas,

Tabel 4. Spesifikasi Rinci Pengadaan Furniture Tahun 2016

Jenis Furniture	Peruntukan (Kelas/laboratorium/perpustakaan/ruang dosen)	Spesifikasi Teknis	Jumlah	Harga Satuan	Perkiraan Biaya (ribuan rupiah)
1. ...					
2. ...					
n. ...					
Total					

Tabel 5. Spesifikasi Rinci untuk Peralatan Pendukung Tahun 2016

Nama Peralatan	Spesifikasi Teknis	Jumlah	Harga Satuan (ribuan rupiah)	Perkiraan Biaya (ribuan rupiah)	Peruntukan
1. ...					
2. ...					
n. ...					
Total					

^{*)}Diisi dengan nama laboratorium, pembelajaran di kelas, atau rusang dosen

Tabel 6. Spesifikasi Rinci Pembangunan Gedung Tahun 2016^{*)}

Fungsi Ruang	Luas Ruang (m ²)	Perkiraan Biaya per unit luasan (m ²)	Perkiraan Biaya (ribuan rupiah)
1. Gedung/Ruang Kelas			
2. Gedung/Ruang			
3. Gedung/Ruang			
Total			

^{*)} Harus dilengkapi dengan dokumen perencanaan, spesifikasi, RAB dan rencana jadwal pelaksanaan

Tabel 7. Rencana Anggaran Belanja PP-PTS Tahun Anggaran 2016

No	Komponen Biaya /Rincian Belanja	Perhitungan Tahun 2016		
		Volume	Harga Satuan (Rp.)	Jumlah Biaya (Rp.)
1	Pengadaan Barang			
	A Pengadaan alat laboratorium Matematika	1 Paket		
	B Pengadaan alat laboratorium Kimia	1 Paket		
	C Pengadaan alat laboratorium Biologi	1 Paket		
	D Pengadaan alat laboratorium Fisika	1 Paket		
	E Pengadaan alat laboratorium Bahasa	1 Paket		
	F Pengadaan alat laboratorium Komputer Teknik	1 Paket		
	G Pengadaan peralatan pendidikan dan TIK	1 Paket		
	H Pengadaan furniture	1 Paket		
	I. Pengadaan peralatan pendukung	1 Paket		
2	Pembangunan Gedung			
	A Gedung kelas	... Paket		
	B Gedung laboratorium	... Paket		
	C Gedung perpustakaan	... Paket		
TOTAL DANA PP-PTS YANG DIUSULKAN				

9. Lampiran-lampiran

Lampiran berisi kelengkapan proposalyaitu:

1. Akta Notaris Pendirian Badan Penyelenggara dari PTS beserta semua perubahan yang telah dilakukan
2. SK Pendirian Awal PT dan perubahannya dari Kementerian urusan pendidikan tinggi
3. Fotocopy Akta Pengesahan badan hukum nirlaba penyelenggara perguruan tinggi yang telah dilegalisir oleh Kumham,
4. Laporan PDDIKTI 2014-2 dan 2015-1,

5. Sertifikat status lahan kampus PTS atas nama badan hukum nirlaba penyelenggara perguruan tinggi(khusus bagi yang mengusulkan pekerjaan sipil),
6. Surat pernyataan Rektor/Direktur/Ketua bahwa PTS tidak menyelenggarakan program yang bertentangan dengan kebijakan Ditjen Dikti seperti "kelas jauh", ijazah palsu, dan menyelenggarakan program tanpa izin, dll.
7. Surat pernyataan Rektor/Direktur/Ketua bahwa **PTS tidak sedang dalam proses pengajuan perubahan bentuk perguruan tinggi dan perubahan badan hukum nirlaba/yayasan.**
8. Surat pernyataan Rektor/Direktur/Ketua bahwa PTS tidak sedang memiliki masalah internal dengan yayasan dan tidak dalam sengketa hukum.
9. Fotokopi sertifikat akreditasi program studi atau bukti pengajuan akreditasi bagi yang sedang memproses.

VII. ADMINISTRASI PROPOSAL

Proposal ditulis dengan ukuran A4 dengan font *Times New Roman* ukuran 12pt, 1 spasi dengan format sampul depan seperti pada **Lampiran A**. Proposal disampaikan secara *online* melalui <http://pppts.ristekdikti.go.id>. Tatacara pemasukan proposal dapat diunduh pada <http://pppts.ristekdikti.go.id>. Jadwal pemasukan dan proses seleksi proposal sebagai berikut:

No	Kegiatan	Jadwal
1	Registrasi	27 April 2016
2	Upload proposal	27 April s.d. 27 Mei 2016
3	Evaluasi administrasi dan dokumen	28 Mei s.d. 19 Juni 2016
4	Presentasi	20 s.d. 22 Juni 2016
5	Penetapan penerima hibah	24 Juni 2016
6	Penandatanganan kesepakatan	27 Juni 2016
7	Pelaksanaan PP-PTS	Juli s.d. Desember 2016
8	Monev PP-PTS	Nopember s.d. Desember 2016
9	Laporan Akhir PP-PTS	20 Desember 2016



LAMPIRAN A
ADMINISTRASI
PROPOSAL

LAMPIRAN A

Format Sampul Depan



**PROPOSAL
PROGRAM PEMBINAAN PTS
Tahun Anggaran 2016**



Perguruan Tinggi:
Badan Hukum Nirlaba Penyelenggara PT

**Direktorat Jenderal Kelembagaan Ilmu Pengetahuan, Teknologi, dan Pendidikan Tinggi
Kementerian Riset dan Pendidikan Tinggi
2016**

Halaman Identifikasi Dan Pengesahaan

- 1. Nama Badan Hukum Nirlaba Penyelenggara PT : _____
- 2. Alamat Badan Hukum Nirlaba Penyelenggara PT : _____

- 3. Penanggung Jawab¹ : _____
- 5. Ketua Pelaksana²
 - Nama : _____
 - Alamat : _____
 - Telepon Kantor : _____
 - Telepon *Cellular* : _____
 - Fax : _____
 - e-mail : _____
- 6. Nama Perguruan Tinggi : _____
- 7. Alamat Perguruan Tinggi : _____

- 8. Program Studi yang diusulkan untuk ditingkatkan mutunya : 1.
 2.
 3.
 4.

Mengetahui,
 <Rektor/Direktur/Ketua>

< Tempat, tanggal.....>
 Penanggung Jawab,
 <Ketua Badan Hukum Nirlaba Penyelenggara PT)

(.....)

(.....)

¹Penanggung jawab adalah Ketua Badan Hukum Nirlaba Penyelenggara PT.

²Ketua Pelaksana adalah ketua gugus tugas untuk implementasi hibah yang ditunjuk oleh Pemimpin Badan Hukum Nirlaba Penyelenggara PT.



LAMPIRAN B

**FORMAT PROFIL
PERGURUAN TINGGI**

LAMPIRAN B

TABEL-TABEL INI UNTUK DIMASUKKAN PADA BAB 1 PROPOSAL

A. MAHASISWA

Tabel 1. Profil Penerimaan Mahasiswa Baru 3 Tahun Terakhir

No	Prodi	2012/2013			2013/2014			2014/2015			Rerata Keketatan
		Pendaftar	Diterima	Keketatan	Pendaftar	Diterima	Keketatan	Pendaftar	Diterima	Keketatan	
		1	2	3=1/2	4	5	6=4/5	7	8	9=7/8	10
1											
2											
3											
dst											

Tabel 2. Profil Mahasiswa Aktif Tahun 2015

No	Program Studi	Jumlah Mahasiswa Aktif Tahun 2015			
		D3	D4	S1	Profesi
1					
2					
3					
dst					
	TOTAL				

Tabel 3. Profil IPK Mahasiswa Aktif Tahun 2014/2015

No	Program Studi	Rerata IPK Mahasiswa Aktif Tahun 2014/2015			
		D3	D4	S1	Profesi
1					
2					
3					
dst					
	TOTAL				

Tabel 4. Data Akreditasi Program Studi

No	Program Studi	Peringkat Akreditasi	SK Akreditasi	Masa berlaku Akreditasi
1				
2				
3				
dst				

B. LULUSAN

Tabel 5. Jumlah Lulusan tiga tahun terakhir

Tahun Lulus	Jumlah Lulusan				
	D3	D4	S1	Profesi	TOTAL
2012/2013					
2013/2014					
2014/2015					
TOTAL					

Tabel 6. Profil Lulusan Berdasarkan IPK dan Tahun Lulus

No	Prodi	2012/2013								2013/2014								2014/2015											
		<2.5		2.5≤IPK<3.0		≥3.0		Jml Lulusan	Rerata IPK	<2.5		2.5≤IPK<3		≥3.0		Jml Lulusan	Rerata IPK	<2.5		2.5≤IPK<3.0		≥3.0		Jml Lulusan	Rerata IPK				
		Jml	%	Jml	%	Jml	%			Jml	%	Jml	%	Jml	%			Jml	%	Jml	%	Jml	%						
1																													
2																													
3																													
dst																													

Tabel 7. Rerata masa studi lulusan S1 tiga tahun terakhir.

No	Program Studi	Rerata masa studi lulusan			Jumlah Lulusan	Rerata Lama Studi (tahun)
		2012/2013	2013/2014	2014/2015		
1						
2						
3						
Dst						
	Total Lulusan					

Tabel 8. Profil produktivitas program studi selama 3 tahun terakhir

No	Program Studi	2012/2013			2013/2014			2014/2015		
		Jumlah Mhs baru	Total lulusan	Produkti -vitas(%)	Jumlah Mhs baru	Total lulusan	Produkti -vitas(%)	Jumlah Mhs baru	Total lulusan	Produkti -vitas(%)
		1	2	3=2/1	4	5	6=5/4	7	8	9=8/7
1										
2										
3										
dst										
	PERGURUAN TINGGI									

C. SUMBERDAYA MANUSIA

Tabel 9. Profil Dosen Tetap berdasarkan jenjang pendidikan, usia dan jabatan fungsional

Prodi	Jabatan	Kelompok Umur (tahun)															Jumlah
		< 31			31 - 40			41 - 50			51 - 60			> 60			
		S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3	
Prodi 1	Belum punya jabatan																
	Ass. Ahli																
	Lektor																
	L. Kepala																
	Guru Besar																
Prodi 2	Belum punya jabatan																
	Ass. Ahli																
	Lektor																
	L. Kepala																
	Guru Besar																
Prodi 3	Belum punya jabatan																
	Ass. Ahli																
	Lektor																
	L. Kepala																
	Guru Besar																
dst	Belum punya jabatan																
	Ass. Ahli																
	Lektor																
	L. Kepala																
	Guru Besar																
TOTAL																	

Tabel 10. Profil Dosen Tidak Tetap berdasarkan jenjang pendidikan, usia dan jabatan fungsional

Prodi	Jabatan	Kelompok Umur (tahun)															Jumlah
		< 31			31 - 40			41 - 50			51 - 60			> 60			
		S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3	
Prodi 1	Belum punya jabatan																
	Ass. Ahli																
	Lektor																
	L. Kepala																
	Guru Besar																
Prodi 2	Belum punya jabatan																
	Ass. Ahli																
	Lektor																
	L. Kepala																
	Guru Besar																
Prodi 3	Belum punya jabatan																
	Ass. Ahli																
	Lektor																
	L. Kepala																
	Guru Besar																
dst	Belum punya jabatan																
	Ass. Ahli																
	Lektor																
	L. Kepala																
	Guru Besar																
TOTAL																	

D. FASILITAS

Tabel 11. Profil Sarana Ruang Kelas

No	Program Studi	Jumlah Ruang Kelas	Kepemilikan		Jumlah Penggunaan			Fasilitas Pengajaran yang terdapat pada ruang tersebut*			
			sendiri	Sewa	Shift/ hari	Waktu/ shift (menit)	hari/ minggu	Nama/Jenis Fasilitas	Jumlah	Kondisi	
										Baik	Rusak
1	2	3	4	5	6	7	8	9	10	11	12
1											
2											
3											
dst											

Tabel 12. Profil Sarana Ruang Laboratorium

No	Program Studi	Jumlah Laboratorium	Kepemilikan		Jumlah Penggunaan			Fasilitas Pengajaran yang terdapat pada ruang tersebut*			
			sendiri	sewa	Shift/ hari	Waktu/ shift (menit)	hari/ minggu	Nama/Jenis Fasilitas	Jumlah	Kondisi	
										Baik	Rusak
1	2	3	4	5	6	7	8	9	10	11	12
1											
2											
3											
dst											



LAMPIRAN C

DAFTAR PERALATAN YANG DAPAT DIUSULKAN

LAMPIRAN C

C1. LABORATORIUM DASAR

C1.1. LABORATORIUM MATEMATIKA

No	Nama Barang	Spesifikasi	Keterangan
1	Personal Komputer	a. Desktop PC, Intel Core i5-4590 Processor (3.3 GHz, 6M Cache) up to 3.70 GHz, 4GB DDR3, 1TB HDD, DVDRW, VGA Intel HD Graphics, NIC, Win 7 Pro, LED 18.5. Power Supply 350W; USB Mouse; Audio Integrated; USB Keyboard; Networking Integrated; 8 in 1 Media Reader; Micro Tower ATX; Antarmuka / Interface: 2 X USB 3.0, 2 X USB 2.0, 1 x Microphone Port, 1 x Headphone, 2 X USB 3.0, 4 X USB 2.0, 2 x PS/2, 1 x D-Sub, 1 x DVI-I, 2 x Disply Port, 1 x 8 Channel Audio (3 ports), 1 X RJ45 LAN, 1 x Parallel Port, 1 x COM Port (Serial Port), Chipset Intel B85; Included : Office Home and Business 2016 32-bit/x64 English APAC EM DVD	
		b. Desktop PC, Intel Core i5-4590s Processor (6M Cache, 3.0 GHz up to 3.60GHz), 4GB DDR3 PC3-12800 (Max16GB, 4 DIMM Slots), 1TB HDD, DVD±RW, VGA Intel HD Graphics, GbE NIC, Win 7 Pro, LED 18.5, Chipset Intel® Q85, Memori Slot 4; Audio Integrated; Networking Integrated; Kecepatan Jaringan 10 / 100 / 1000 Mbps; Keyboard Wired Keyboard; USB Optical Mouse; 1x PCI, 2x PCI-ex1, 1x PCI-ex16, Front - USB: (2) USB 3.0, Microphone: 1, Headphone: 1, Rear - Microphone: 1, Headphone: 1, Rear - USB: (4) USB 2.0, (2) USB 3.0, Rear - Display (Output): (1) VGA, (2) DP, Rear - PS/2: 2 (1 for Keyboard, 1 for Mouse) x Optional, Rear - Serial: (1) Standard, (1) Optional, Rear - Parallel: (1) Optional, LAN (RJ45): 1, Rear - Audio: 3 (Line in / Line out / Mic), Micro Tower ATX, Daya / Power 280 W, Included : Office Home and Business 2016 32-bit/x64 English APAC EM DVD	
		c. Desktop PC, Intel Core i5-4590 Processor Up To 3.7Ghz, 6MB), 4GB DDR3, 500GB HDD, VGA Intel HD Graphics 4600, NIC, Win7 Pro 64bit, LCD 18.5" Widescreen With LED, 4 External USB 3.0 ports (2 front, 2 rear) and 6 External USB 2.0 ports (2 front, 4 rear) and 1 Internal USB 2.0 (MT only), 1 RJ-45, 1 Serial, 1 VGA, 2 DisplayPort, 2 PS/2, 2 Line-in, Integrated Realtek RTL8151GD Ethernet LAN 10/100/1000, Intel Q87 Express Chipset, Included : Office Home and Business 2016 32-bit/x64 English APAC EM DVD	
		d. Desktop PC, Intel® Core i5-4590 Processor (3.3 GHz, 6M cache) up to 3.70 GHz, 4GB DDR3, 1TB HDD SATA, DVD±RW, Audio, NIC, VGA Intel HD Graphics 4600, Win 7 Pro 64bit, LED 18.5. Realtek RTL8151GH Network Connection, 15 in 1 MCR, Pararel & Serial Port, USB 2.0 FRONT 2 + REAR 4, USB 3.0 Front 2, 3xPCI Express x1, 1xPCI Express x16, USB KB + Mouse, Memori Slot	

No	Nama Barang	Spesifikasi	Keterangan
		(2)DIMM up to 16GB, Small Form Factor ATX, Daya / Power 240w, Chipset H81, Included : Office Home and Business 2016 32-bit/x64 English APAC EM DVD	
2	Notebook / Laptop	<p>a. Intel Core i5-6200U Processor (2.3 GHz, 3M Cache) up to 2.80 GHz, 4 GB DDR3L, Kapasitas Penyimpanan 1 TB HDD, Nvidia GeForce 940M 2GB, Wireless Network Type Integrated, Kecepatan Jaringan 10/100 Mbps, Wireless Network Protocol IEEE 802.11b, IEEE 802.11g, IEEE 802.11n, DVDRW, Keyboard Standard Keyboard, Ukuran Layar 14.0 Inch, Bluetooth 4.0, Baterai 4 Cell, Daya / Power 65 W AC power adapter, Speaker Integrated, 2x USB 3.0, 1x USB 2.0, HDMI, RJ-45, headphone/microphone combo, Tipe Layar LED Backlit (Touchscreen), Ragam Input Device Touchpad, Resolusi Layar 1366 x 768, CPU Brand INTEL, Berat 1.96 kg, Win 10, FREE Branded Backpack. Included : Office Home and Business 2016 32-bit/x64 English APAC EM DVD</p> <p>b. Intel(R) Core (TM) i5-6200U Processor (3M Cache, up to 2.80GHz), Wireless Network Type Integrated, 500 GB HDD, Speaker Integrated, Tipe Layar LED Backlit, Daya / Power 65W AC Adapter, Resolusi Layar 1366 x 768, Baterai 4 Cell, Ukuran Layar 14 Inch, Tipe Grafis AMD Radeon (TM) R5 M335 2GB DDR3, Standard Keyboard, 4 GB DDR3L, Wireless Bluetooth Integrated, CPU Brand INTEL, Win 10. Included : Office Home and Business 2016 32-bit/x64 English APAC EM DVD</p> <p>c. Intel® Core™ i5-6200U Processor (2.3 GHz, 3M Cache) up to 2.80 GHz, 4GB DDR3, NVIDIA® GeForce® GT930M 2GB, 14 Inch, Resolusi Layar 1366 x 768, LED backlight, Audio Integrated, Speaker Integrated, Kapasitas Penyimpanan 500 GB HDD, DVD±RW, Networking Integrated, Wireless Network Type Integrated, Wireless Network Protocol IEEE 802.11b, IEEE 802.11g, IEEE 802.11n, Integrated Bluetooth 4.0, Standard Keyboard, Touch Pad, 1x USB 3.0, 2x USB 2.0, HDMI, Baterai 2 Cell, Free Carrying bag. Included : Win 10 + Office Home and Business 2016 32-bit/x64 English APAC EM DVD</p>	
3	UPS	<p>a. Back-UPS, UPS 625VA / 325W, 230V, UPS with AVR, ASEAN</p> <p>b. UPS CE 600 kapasitas 600 VA</p> <p>c. Line Interactive, 650VA, 230VAC, Touch Screen Panel, Speed charging</p>	

C1.2. LABORATORIUM KIMIA

No	Nama Barang	Spesifikasi	Keterangan
1	UV-Visible Spectrophotometer	a. Wavelength range 190 to 1100nm; Spectral bandwidth 1nm (190 to 1100nm); Wavelength display 0.1-nm increments; Wavelength setting 0.1-nm increments (1-nm increments when setting scanning range); Wavelength	

No	Nama Barang	Spesifikasi	Keterangan
		accuracy $\pm 0.1\text{nm}$ at 656.1nm D2 $\pm 0.3\text{nm}$ (190 to 1100nm); Wavelength repeatability $\pm 0.1\text{nm}$; Stray light less than 0.02% NaI at 220nm, NaNO ₂ at 340nm less than 1.0% KC I at 198nm; Photometric system Double Beam; Photometric range Absorbance: -4 to 4 Abs; Transmittance: 0% to 400%; Photometric accuracy ± 0.002 Abs (0.5Abs), ± 0.004 Abs (1.0Abs), ± 0.006 Abs (2.0Abs); Photometric repeatability less than ± 0.001 Abs (0.5Abs), less than ± 0.001 Abs (1Abs), less than ± 0.003 Abs (2.0Abs); Baseline stability less than 0.0003 Abs/H at 700nm (one hour after light source turned ON); Baseline flatness within ± 0.0006 Abs (190 to 1100nm, one hour after light source turned ON); Noise level Within 0.00005 Abs RMS value (at 700nm); Includes PC Desktop Branded: core i5-4590 4GB 500GB Win 7 Pro 32; LED Monitor 18,5"; Printer Deskjet; USB cable USB2-20BK	
		b. Optical design : Dual beam-interface reference detector; Spectral bandwidth : 1.8 nm; Light source (typical lifetime) : Xenon flash lamp; Detectors : Dual silicon photodiodes; Wavelength range : 190-1100 nm; Wavelength accuracy : ± 1.0 nm; Wavelength repeatability : ± 0.5 nm; Wavelength slew speed : 11,000 nm/min; Wavelength scan speed : 10-4200 nm/min; Wavelength data interval for scanning : 0.2, 0.5, 1.0, 2.0, 3.0, 5.0 nm; Photometric linear range : up to 3.5 A at 260 nm; Photometric display : -0.5 – 5.0A; 1.5 – 125%T; $\pm 9999\text{C}$; Photometric accuracy : ± 0.005 A at 1.0 A 0.010 A K ₂ Cr ₂ O ₇ ; Photometric noise : < 0.00025 at 0.0 A, < 0.00050 at 1.0 A, < 0.00080 at 2.0 A, RMS at 260 nm; Photometric drift : < 0.0005 A/hr; Stray light : < 0.08% T at 220, 340 nm (NaI, NaNo ₂) < 1.0% T at 198-200 nm (KCL); Display : Graphical with LCD backlight 9.7 x 7.1 cm (3.8 x 2.8 in); Keypad : Sealed membrane with tectile response keys; Printer: 40 col internal (text/graphic); External USB printer (HP PCL 3.0 and greater); Connectivity : USB type A port for USB memory device (front panel); USB type B port for optional computer connectivity (rear panel); USB type A port for external prntr (rear panel); Power requirements : Selectable automatically, 100-240 V, 50-60 Hz; Includes : Printer; US power cord, 6-position automatic cell holder, Single cuvette holder, full range scanning, fast scanning capability,	
		c. Wavelength accuracy ± 1 nm; Wavelength range 190 - 1100 nm; Wavelength	

No	Nama Barang	Spesifikasi	Keterangan
		<p>reproducibility < 0.1 nm; Wavelength resolution 0.1 nm; Wavelength selection Automatic; Operating conditions 10 - 40 °C , max. 80% relative humidity (not condensing) Operating mode Transmittance (%), Absorbance and Concentration, Scanning; Optical system Reference beam, spectral; Power supply Power cord, 100 - 240 V, 50 - 60 Hz; Pre-programmed methods > 240; Printer compatibility Supports most office deskjet printers; Quality assurance Function to schedule and document QA with pass/fall indication; Source lamp Tungsten (VIS), Deuterium lamp (UV); Specific technology RFID for easy method update, sample ID and Certificate of Analysis; Spectral bandwidth 2 nm; User programmes 200; Cuvette compatibility Rectangular: 10, 20, 30, 50 mm, 1 inch; round: 13 mm, 1 inch; Data storage 5000 measured values (Result, Date, Time, Sample ID, Operator ID); Display 7" TFT WVGA colour touchscreen; IBR+ Automatic test recognition, lot control and expiry date check; Includes 1 x Power Cord, 1x Universal-Adapter, 1x Dust Cover, 1x Printed multilingual basic user manual, LINK2SC Data exchange with SC 1000 controller</p>	
	d.	<p>Double beam spectrophotometer with highly stable optics; Variable spectral bandwidth 0.5, 1, 2, 4, 5nm; Integrated user interface; USB port for data storage; Wavelength range 190 to 1100nm; Wavelength resolution 0.1nm; Wavelength accuracy $\pm 0.3\text{nm}$ (at 0.5 and 1nm bandwidth) $\pm 0.5\text{nm}$ (at 2, 4 and 5nm bandwidth); Wavelength reproducibility $\pm 0.2\text{nm}$; Spectral bandwidth Variable 0.5, 1, 2, 4, 5nm; Photometric range - 0.3 to 3.0A 0 to 200%T; Photometric accuracy $\pm 0.002\text{A}$ (0- 0.5A) $\pm 0.3\% \text{ T}$ (0- 100%T); Photometric reproducibility $\pm 0.001 \text{ Abs}$ (0 to 0.5 Abs) $\pm 0.002 \text{ Abs}$ (0.5 to 1.0 Abs) 0.15%T (0- 100%T); Resolution 0.1%T, 0.001A; Stray light < 0.05%T at 220 and 360nm; Noise 0.0005A; Stability $\pm 0.001\text{A/h}$ at 500nm after 15 min warm up; Multi-wavelength Up to 10 wavelengths, up to 20 wavelengths with PC software; Calculations Ratio, difference, formulae with factors; Spectrum range Any range between 190 and 1100nm; Scan speed 100 to 2000nm/min; Scan interval 0.1, 0.2, 0.5, 1, 2 or 5nm; Analysis Auto peaks and valleys, zoom . Addition, subtraction, peak ratios, smoothing, area under curve, wavelength table, derivatives, overlay with PC software; Kinetics Up to 12 hours with time intervals of</p>	

No	Nama Barang	Spesifikasi	Keterangan
		0.1, 0.2, 0.5, 1, 2, 5, 10 or 30 seconds; Analysis Slope and formula of line of best fit between any two points; Quantitation points Up to 3 wavelengths; Quantitation Calibration Blank with up to 10 standards or factor; Concentration range 0- 99999; Calibration Blank with standards or factor; DNA/ RNA and Protein DNA/RNA Ratio, concentration, A320 correction; Light source Tungsten halogen and Deuterium lamps; Lamp changeover 325 to 370nm selec table; Outputs USB and parallel; Includes single 10x10mm cuvette holder in sample and reference position, instruction manual, power cables, PC software on CD ROM with USB connection cable and dongle, 4GB USB memory stick, 2 x quartz cuvettes, 4 x glass cuvettes and FREE dust cover and 230V power supply	
	e.	1) Wavelength Range: 190 nm – 1100 nm; Spectral Bandwidth: 1.0 nm; Resolution: 1nm; Stray Light: <0.1%T (220 nm, NaI; 340 NaNo2), >=2.0Abs (KCl, 200nm); Wavelength Accuracy: 0.3nm; Wavelength Reproducibility: 0.2 nm 2) Photometric System: The double-beam monitoring ratio system; Photometric Method: Transmittance, absorbance, energy and concentration; Photometric Range: - 0.3~3.0 Abs; Photometric Accuracy: 0.002Abs (0~0.5A), 0.004Abs (0.5~1A), 0.3%T (0~100%T); Photometric Reproducibility: 0.001Abs (0~0.5A), 0.002Abs (0.5~1A), 0.15%T (0~100%T), Photometric Display: 0; Photometric Noise: 0.001Abs (500nm, 0Abs 2nm Spectral Bandwidth); Scanning Speed: 1400nm/min; Baseline Flatness: 0.0015 Abs (190-1100nm); Baseline Stability: 0.0008Abs/h (500nm, 0Abs 2nm Spectral Bandwidth, 2Hr. warm-up); Slew Rate of Wavelength: 3600nm/min 3) DNA/RNA Measurement: Results Printout: Printing of measured data by using any Printer with Parallel Port connection available. 4) Mainframe: Compact and standalone spectrophotometer mainframe; Light Source: Socket Deuterium Lamp and Socket Tungsten Halogen Lamp; Detector: Double Beam; Sample Chamber: 2 cell holder; Display Liquid Crystal Display (LCD 320 iA240 dot matrix); Keypad: Touch soft keys; PC Interface: RS-232; Includes 2 Auto Cell Holder, 8 Optical Glass Cells 10mm, 2 Quartz Cells 10mm, 1 Dust cover, 1 Power cable, 1 PC cable, 1 Software CD for Windows 98/2000/XP/7, 1 Software Operation Manual	

No	Nama Barang	Spesifikasi	Keterangan
		in 18 different languages, 1 Spare Tungsten Halogen Lamp, 1 Block Light Cell, 1 Extra fuse	
2	Timbangan Digital	a. capacity (g) 210; Repeatability (Std Dev) 0,1mg; Readability d (g) 0,0001; Linearity (mg) 0,3; Application modes : weighing, part counting, percent; platform size (mm) 90 dia. Cal Weight-Span (g) 100g or 200g; Cal Weight-Linearity (g) 100g+200g; Taring Time 1 Second; Stabilization Time 3 Seconds; Draftshield	
		b. Capacity 220 g; Minimum Display 0,1 mg /0,01 mg; Repeatability (Standard deviation, s) 0,1 mg; Linearity $\pm 0,2$ mg; Response Time (stabilization time, typical) 3 s; Calibration weights Built-in; Operating ambient temperature 5 to 40°C; Temperature coefficient of sensitivity (10 to 30°C) ± 2 ppm /° C (When PSC is Off); Sensitivity stability against temperature change (when PSC is ON, 10 - 30°C) ± 2 ppm; Pan size approx. 80 mm diameter; approx. 220 mm (W) x 330mm (D) x 310 (H); Weight approx. 7 kg; Power consumption approx. 7 W	
		c. Weighing capacity 210 g; Readability 0.1 mg; Tare range (subtractive) 210 g; Repeatability 0.2 mg; Linearity 0.3 mg; Calibration weight 200 g; Pan size (diameter) 90 mm; Bal. housing (WxDxH) 200x275x300 mm; Net weight approx. 3.0 kg	
3	Oven	a. Volume 115L; Exhaust duct-outer 52mm; steam space volume 142L; Number of racks 2-5; Load per rack 15kg; Electronically-controlled APT.line™ preheating chamber technology with natural convection; Temperature range of 5 °C (9 °F) above ambient temperature up to 300 °C (572 °F); DS controller with integrated timer 0 to 99 hours; Digital temperature setting with an accuracy of one degree; One ramp function; Independent adjustable temperature safety device, Class 2 (DIN 12880) with visual temperature alarm; Adjustable ventilation by means of rear exhaust duct Ø 50 mm (2 inch) with ventilation flap and front ventilation slide; 2 chrome-plated racks; Air change at 150 °C 10x; Heating up time to 70 °C 15 Min, to 150 °C 29 Min, to 250 °C 66 Min; Nominal power 1600 W	
		b. Operating temperatures from 50° to 250°C; Automatic over-temperature alarm system; Low overall energy consumption; Built in timer; Corrosion-resistant stainless-steel chambers with rounded corners; Large, easy	

No	Nama Barang	Spesifikasi	Keterangan
		to read vacuum fluorescent display; Easy to use, microprocessor-controlled touch button operation; Doors can be opened over 180°C; Capacity (Metric) 105L Depth (English) Interior 16.3 in. Depth (Metric) Interior 41.5cm Dimensions (D x W x H) Interior 16.3 x 17.2 x 22.8 in. (41.5 x 43.8 x 58cm) Dimensions (L x W x H) Exterior 22.2 x 25.2 x 32.3 in. (56.5 x 64 x 82cm) Height (English) Exterior 32.3 in. Height (English) Interior 22.8 in. Hertz 50/60Hz Height (Metric) Exterior 82cm Height (Metric) Interior 58cm Length (English) Exterior 22.2 in. Length (Metric) Exterior 56.5cm Shelves 2 supplied/ 16 max. Temperature Control Microprocessor control with vacuum fluorescent display Timer ON / OFF Temperature Stability $\pm 0.4^{\circ}\text{C}$ Voltage 230V Width (English) Exterior 25.2 in. Wattage 3100w Width (Metric) Exterior 64cm Width (English) Interior 17.2 in. Width (Metric) Interior 43.8cm Electrical Requirements 230V 50/60Hz	
		c. Textured Stainless Steel Casing: w x h x d: 745 x 867 x 584 mm, fully insulated stainless steel door with 2-point locking (compression door lock), rear zinc-plated steel; Interior - Heating Concept: w x h x d: 560 x 480 x 400 mm, 108 l, easy-to-clean interior, made of stainless steel, reinforced by deep drawn ribbing with integrated and protected large-area heating on four sides: <ul style="list-style-type: none"> · 2 stainless steel grids, · Max. loading of chamber: 175 kg; Temperature Range: <ul style="list-style-type: none"> · min. 5°C above ambient up to $+300^{\circ}\text{C}$ · Voltage / Power Rating, <ul style="list-style-type: none"> · 230 V (+/- 10%), 50/60 Hz / approx. 2.800 W, · 115 V (+/- 10%), 50/60 Hz / approx. 2.200 W 	
4	Furnace	a. Rated temperature to 1000°C Work space volume 3.5 Liter Work space dimensions 170W x 130H x 160D mm Exterior dimensions 456W x 646H x 570D mm Heating up time 110 min. Temperature of exterior casing $< 60^{\circ}\text{C}$ Power consumptions 230V, 50/60Hz, 2500 Watts	
		b. Temp. Range: $300^{\circ}\text{C} \sim 1000^{\circ}\text{C}$; Capacity 4,5 liter; required time to be reached 800°C 16min; Temp. Internal: ceramic fiber with heating wire; external: powder coated steel; insulation: ceramic fiber; thermocouple K-Type; safety device: over temp. an over current protector, sensor error detector; Designed for Ash-determinations, Enameling, Fusions, Ignitions, and Performing precipitate drying; Digital PID Controller; Simplest control by Jog-Shuttle switch and LCD display; Digital timer function: 99hr 59min; Ceramic fiber with Built-in Heating Wire, 4-Side Heating; Short	

No	Nama Barang	Spesifikasi	Keterangan
		Heating-Up periods; Low weight and high grade insulation;	
		c. Capacity 4 liter, Power (kW) : 1.8, Electrical connection : single-phase, Minutes to Tmax : 35, Tmax 1100 °C, working temperature 1050 °C; Heating from two sides from heating elements in quartz glass tubes; Maintenance-friendly replacement of heating elements and insulation; Multilayered insulation with fibre plates in the furnace chamber; Casing made of sheets of textured stainless steel (non-rusting design); Double-walled casing for low external temperatures and high stability; Folding door which can also be used as a work surface; Exhaust air outlet in rear wall; Low-noise high-power relay; Compact dimensions and light weight; Controller mounted in side space;	
5	Mikroskop Binocular	a. Aluminum die-casting metal frame, Protective covering, Infinity optical system; Built-in transmitted illumination system, LED Power Consumption 0.5 W (nominal values), cable storage compartment; Stage height movement Focusing (coarse movement stroke: 15 mm), coarse adjustment limit stopper; Torque adjustment for coarse adjustment knob, Fine focus knob (minimum adjustment gradations: 2.5 µm); Fixed quadruple Revolving nosepiece; Wire movement mechanical fixed stage, Traveling range: 76 mm (X) x 30 mm (Y), Specimen holder, Specimen position scale; Inclined binocular tube 30°, Locking pin for easy binocular rotation, Interpupillary distance adjustment range: 48 – 75 mm, Eyepoint adjustment: 370.0 – 432.9 mm; Plan achromat Objectives, anti-fungus : 4x NA: 0.10 W.D.: 27.8 mm; 10x NA: 0.25 W.D.: 8.0 mm; 40x NA: 0.65 W.D.: 0.6 mm; 100xOil NA: 1.25 W.D.: 0.13 mm (CX23LEDRFS1 only); Eyepiece (10x) Field Number (FN): 20 (anti-fungus); Light Weight microscope (Approx. 5.9 kg); Rated Voltage/Electric Current AC 100–240 V 50/60 Hz 0.4 A; Power Consumption Less than 2 W	
		b. CFI Infinity Optical System 40 – 1000 X Quadruple click-stop nosepiece Eyepiece tube (anti-mold); Binocular tube (inclination: 30°; 360° rotatable Siedentopf-type, Interpupillary distance: 47-75 mm) Eyepoint height can be raised 34mm by swinging the eyepiece tube front part E1-CFI 10X (F.O.V 18mm) Coarse motion: 37.7mm per rotation, Fine motion: 0.2mm per rotation with 2µm scale increments Abbe condenser (made of glass), N.A 1.25 CFI Plan	

No	Nama Barang	Spesifikasi	Keterangan
		<p>Achromat 4x, 10x, 40x, 100x oil High luminescent white LED illuminator with Fly eye lens is a low power LED for 60,000 hours operation, Includes : E100 LED Main body (220-240V) Binocular Eyepiece Tube, anti-mould Eyepiece 10X with diopter adjustment on each eyepiece Abbe condenser with objective position guide Plan Achromat 4X, N.A. 0.10, W.D. 25mm (FOV18) Plan Achromat 10X, N.A. 0.25, W.D. 6.7mm (FOV18) Plan Achromat 40X, N.A. 0.65, W.D. 0.6mm (FOV18) Plan Achromat 100X oil, N.A. 1.25, W.D. 0.14mm , spring-loaded (FOV 18mm) Immersion oil A, 8cc Power Cord BE Anti-mold agent</p>	
6	Lemari Asam	<p>a. Useful dimension (wxdxh): 823x600x660 mm, Overall dimension (wxdxh): 885x760x1120 mm, Exhaust duct ø: 200, Working aperture: 200 mm, Max front aperture: 455 mm, Weight (approx.) w/o filter: 85 kg; Filter: Pre-filter (particulate), Main filter (charcoal), Hepa Filter; Electrical Supply: 220-240/50-60 V/Hz; Power: 122 W; Lighting: 2x18 Watt; Air Flow : Vol/air treated m³/h: 400, Average face speed m/sec: >0,6; Controls: Power on/off, Light on/off, Microprocessor monitoring system checking airflow, pre-filter and filter efficiency, Variable speed air regulation, Audible and visual alarms alert the operator to low/high airflow, fan failure, filter and pre-filter condition, black-out, gas detector and anemometer failure. Construction : Head section: Epoxy coated, zinc plated steel ; Base section: Anodized, aluminium; Spill tray: PVC Acid and solvents resistant; Fan Motor: Centrifugal IP54; Microprocessor controlled monitoring system, Highly effective protection from toxic vapours, High filtration efficiency, Large adsorption capacity, Filter monitoring systems, Ductless. Designed with a microprocessor controlled system for a range of data which includes type and code number of the filter being used, installation date, maximum time allowance for filter use and a warning date for its replacement. Audible and visual alarms are also available to protect the operator. These alarms cover out of range minimum and maximum air velocity, filter saturation, prefilter clogging, anemometer failure, gas detector failure and motorfan malfunctioning. ChemFAST Elite is equipped with fluorescent lighting as well as optional gas/vacuum tap and power point. BUILT IN SAFETY : All electronic components, switches, lighting and motorfan</p>	

No	Nama Barang	Spesifikasi	Keterangan
		<p>have been selected and installed fully isolated from air contaminated with solvents and therefore meet the most stringent safety requirements such as EN 61010/1. Current directives of the European Community are also covered as certified by the CE mark.</p> <p>b. Dimensi (p x l x t) : 1500 x 600 x 2400 mm; Material (optional): Multiplek 18 mm, Soft finishing HPL (Bersertifikat) / Mild steel 1 ~ 1.2 mm finishing epoxy coat ; Alas Meja Kerja (optional): Plenolic resin Black Tahan Larutan kimia dan asam / Granit tanpa sambungan Black Tahan Larutan kimia dan asam; Pintu : Rail Stainless, Sliding dengan Kaca transparan; Lampu : TL 1 x 20 Watt; Voltage : 220 VAC; 1 unit Blower : Chemical resistant 1/2 PK; Include Pipa Blower : Terbuat dari PVC dia 6" optional 8"; Cerobong; Scrubber ; Instalasi Listrik : Dirancang sedemikian rupa sehingga mudah diperbaiki; Pengaturan On/off listrik , blower : Terdapat disisi depan lemari asam; Water Outlet : Bench berbahan Khusus tahan kimia; Nozzle : Polypropylene dan tahan terhadap tumpahan larutan kimia; Sink : Polypropylene dilengkapi dengan bottle trap 1 set; Instalasi air : PVC Wavin atau Rucika; Pengaturan Kran air terdapat di sisi depan lemari asam</p>	
7	Hotplate Magnetic Stirrer	<p>a. Number of stirring positions : 1 Stirring quantity max. per stirring position (H2O) : 10 L Stirring quantity max. (H2O) : 10 L Motor rating input : 15 W Motor rating output: 1.5 W Speed display scale Speed range : 100 - 1500 rpm Heat output : 1000 W Heating rate (1 l H2O in H15) : 5 K/min Heating temperature range : 50 - 500°C Heat control LED Heat control accuracy : ±10 K Speed control : scale 0 – 6 Fixed safety circuit : 550°C Set-up plate material: Glass ceramic Set-up plate dimensions : 180 x 180 mm Dimensions WHD : 220 x 105 x 330 mm Weight : 5 Kg Permissible ambient temperature : 5 - 40°C Permissible relative moisture : 80% Protection class according to DIN EN 60529 : IP 21 Voltage : 230V; Frequency : 50/60 Hz Power input : 1005 W</p> <p>b. Temperature Range (Metric) 540°C (Max Temperature) Max. Temperature (Metric) 540°C Max. Container Size 4L Max. Sample Load 25 lb. Voltage 220/240V Top Plate Material Ceramic Surface Area (English) Heating 7.25 x 7.25 in. Surface Area (Metric) Heating 18.4 x 18.4cm Height (English) 3.88 in. Height (Metric) 10cm Length (English) 13 in. Length (Metric) 33cm Width (English) 8.25 in.</p>	

No	Nama Barang	Spesifikasi	Keterangan
		Width (Metric) 21cm Hertz 50/60Hz Certifications/Compliance cCSAus, CE Marked Dimensions (L x W x H) 13 x 8.25 x 3.88 in. (33 x 21 x 10cm) Electrical Requirements 220/240V 50/60Hz	
8	Magnetic Stirrer	<p>a. Number of stirring positions 1 Stirring quantity max. (H2O) 1.5 l Motor rating input 3 W Motor rating output 2 W Speed display LED Speed range 0 - 2500 rpm Stirring bar length max. 30 mm Speed control 50 RPM Steps Set-up plate material glass Set-up plate dimensions Ø 160 mm Dimensions (W x H x D) 185 x 45 x 205 mm Weight 0.7 kg Permissible ambient temperature 5 - 40 °C Permissible relative humidity 80 % Protection class according to DIN EN 60529 IP 54</p> <p>b. Low profile lightweight design with small footprint; Strong magnetic coupling to ensure consistent stirring during experimental procedures; Brushless DC Motor will not generate heat and “cook” sample; Polypropylene top and body provides excellent chemical resistance ; Speed 150 to 2,500rpm Capacity 2L Voltage 100 to 240V Height (English) 2.56 in. Height (Metric) 65mm Length (English) 5.12 in. Length (Metric) 130mm Width (English) 5.12 in. Width (Metric) 30mm Plug Type Cord set w/various plugs Wattage 5W Hertz 50/60Hz Stirring Range 150 to 2500rpm Top Plate Diameter (English) 4.72 in. Top Plate Diameter (Metric) 120mm Certifications/Compliance CE Body Material Polypropylene Capacity (English) Max. Load 33.07 lb. Capacity (Metric) Max. Load 15kg Motor Type Brushless DC motor</p>	
9	Water Bath	<p>a. microprocessor PID-temperature controller with integrated autodiagnostic system with fault indicator solid state switching unit one Pt100 sensor class A in 4-wire-circuit digital display (LED) of set and actual temperature (0,1°C resolution) and of (remaining) programme time LEDs for indication of programme status material 1.4301 (ASTM 304), corrosion resistant x w x h: 350 x 210 x 140 mm, 10 lt easy-to-clean interior, made of stainless steel, reinforced by deep drawn ribbing, material no. 1.4301 (ASTM 304), laser-welded corrosion-proof large-area heating on three sides min. 5°C above ambient up to +95°C with additional boiling mode (+100°C)</p> <p>b. Temperature Range (Metric) Amb. +5°C to 100°C Heating Capacity 1200W Bath Volume 19L (5.0 GAL) Amperage 9.0-10.5 / 4.3-5.0</p>	

No	Nama Barang	Spesifikasi	Keterangan
		(120V/230V) Display Monochrome LCD Model Precision CIR 19 Temperature Uniformity ± 0.05 °C Cabinet Material Epoxy Powder Coated Cold Rolled Steel Chamber Material 304 Stainless Steel Description 19L Circulating Water Bath Certifications/Compliance UL, CE Dimensions (L x W x H) Exterior 15.5 x 24.9 x 9.8 in. (394 x 632 x 249mm) Electrical Requirements Global Voltage 100-115V/200-230V, 50/60Hz Controller Type Digital Temperature Stability ± 0.1 °C Temperature Presets 4 Includes 2 Stainless Steel Gable Covers, 2 Diffuser Trays, and Rubber Duck	
10	Heating Mantle	<p>a. Flask capacity 1000ml polypropylene outer case Use with round bottom flasks "Cool-to-touch" design Maximum element temperature 450°C Built-in energy regulator Replaceable insulated heater cartridge Indicator lamps for power and heater operation A chemically resistant polypropylene outer casing A grounded earth screen and double fuses for extra safety</p> <p>b. Controlled up to 450°C; Range of sizes available; Tough lightweight, easy to clean aluminium casing; Integrated clamp fitting; feature an emergency cut out which will automatically trigger in the event of a spillage; Flask Capacity 1000 ml; Electrical supply: 230V, 50/ 60Hz 380W</p> <p>c. Flexible coiled heating elements absorb shock, minimizing the risk of flasks breaking; Heating element is attached to rigid thermal insulating cartridge to ensure maximum heat transfer and support; Heating elements and insulation form an easy-to-replace heating cartridge; Unique airflow through ventilation slots beneath and around the rim and heating cartridge keep the exterior "cool-to-the-touch"; Stainless-steel screen covering the heating element is grounded directly to the cable for added protection; Mantles are double fused for added safety; Nonskid feet and support clamps add stability; Flask capacity: 1000mL; Case Material: Powder-coated aluminium; Max Element Temperature: 450°C; Certifications/Compliance CE, CSA</p>	

C1.2. LABORATORIUM BIOLOGI

No	Nama Barang	Spesifikasi	Keterangan
1	Mikroskop Binocular	a. Aluminum die-casting metal frame, Protective covering, Infinity optical system; Built-in	

No	Nama Barang	Spesifikasi	Keterangan
		<p>transmitted illumination system, LED Power Consumption 0.5 W (nominal values), cable storage compartment; Stage height movement Focusing (coarse movement stroke: 15 mm), coarse adjustment limit stopper; Torque adjustment for coarse adjustment knob, Fine focus knob (minimum adjustment gradations: 2.5 μm); Fixed quadruple Revolving nosepiece; Wire movement mechanical fixed stage, KeTraveling range: 76 mm (X) x 30 mm (Y), Specimen holder, Specimen position scale; Inclined binocular tube 30°, Locking pin for easy binocular rotation, Interpupillary distance adjustment range: 48 – 75 mm, Eyepoint adjustment: 370.0 – 432.9 mm; Plan achromat Objectives, anti-fungus : 4x NA: 0.10 W.D.: 27.8 mm; 10x NA: 0.25 W.D.: 8.0 mm; 40x NA: 0.65 W.D.: 0.6 mm; 100xOil NA: 1.25 W.D.: 0.13 mm (CX23LEDRFS1 only); Eyepiece (10x) Field Number (FN): 20 (anti-fungus); Light Weight microscope (Approx. 5.9 kg); Rated Voltage/Electric Current AC 100–240 V 50/60 Hz 0.4 A; Power Consumption Less than 2 W</p>	
		<p>b. CFI Infinity Optical System 40 – 1000 X Quadruple click-stop nosepiece Eyepiece tube (anti-mold); Binocular tube (inclination: 30°; 360° rotatable Siedentopf-type, Interpupillary distance: 47-75 mm) Eyepoint height can be raised 34mm by swinging the eyepiece tube front part E1-CFI 10X (F.O.V 18mm) Coarse motion: 37.7mm per rotation, Fine motion: 0.2mm per rotation with 2μm scale increments Abbe condenser (made of glass), N.A 1.25 CFI Plan Achromat 4x, 10x, 40x, 100x oil High luminescent white LED illuminator with Fly eye lens is a low power LED for 60,000 hours operation, Includes : E100 LED Main body (220-240V) Binocular Eyepiece Tube, anti-mould Eyepiece 10X with diopter adjustment on each eyepiece Abbe condenser with objective position guide Plan Achromat 4X, N.A. 0.10, W.D. 25mm (FOV18) Plan Achromat 10X, N.A. 0.25, W.D. 6.7mm (FOV18) Plan Achromat 40X, N.A. 0.65, W.D. 0.6mm (FOV18) Plan Achromat 100X oil, N.A. 1.25, W.D. 0.14mm , spring- loaded (FOV 18mm) Immersion oil A, 8cc Power Cord BE Anti-mold agent</p>	
2	UV-Visible Spectrophotometer	<p>a. Wavelength range 190 to 1100nm; Spectral bandwidth 1nm (190 to 1100nm); Wavelength display 0.1-nm increments; Wavelength setting 0.1-nm increments (1-nm increments when setting scanning range); Wavelength accuracy \pm0.1nm at 656.1nm D2 \pm0.3nm (190 to</p>	

No	Nama Barang	Spesifikasi	Keterangan
		1100nm); Wavelength repeatability ± 0.1 nm; Stray light less than 0.02% NaI at 220nm, NaNO ₂ at 340nm less than 1.0% KC I at 198nm; Photometric system Double Beam; Photometric range Absorbance: -4 to 4 Abs; Transmittance: 0% to 400%; Photometric accuracy ± 0.002 Abs (0.5Abs), ± 0.004 Abs (1.0Abs), ± 0.006 Abs (2.0Abs); Photometric repeatability less than ± 0.001 Abs (0.5Abs), less than ± 0.001 Abs (1Abs), less than ± 0.003 Abs (2.0Abs); Baseline stability less than 0.0003 Abs/H at 700nm (one hour after light source turned ON); Baseline flatness within ± 0.0006 Abs (190 to 1100nm, one hour after light source turned ON); Noise level Within 0.00005 Abs RMS value (at 700nm); Includes PC Desktop Branded: core i5-4590 4GB 500GB Win 7 Pro 32; LED Monitor 18,5"; Printer Deskjet; USB cable USB2-20BK	
		b. Optical design : Dual beam-interface reference detector; Spectral bandwidth : 1.8 nm; Light source (typical lifetime) : Xenon flash lamp; Detectors : Dual silicon photodiodes; Wavelength range : 190-1100 nm; Wavelength accuracy : ± 1.0 nm; Wavelength repeatability : ± 0.5 nm; Wavelength slew speed : 11,000 nm/min; Wavelength scan speed : 10-4200 nm/min; Wavelength data interval for scanning : 0.2, 0.5, 1.0, 2.0, 3.0, 5.0 nm; Photometric linear range : up to 3.5 A at 260 nm; Photometric display : -0.5 – 5.0A; 1.5 – 125%T; ± 9999 C; Photometric accuracy : ± 0.005 A at 1.0 A 0.010 A K ₂ Cr ₂ O ₇ ; Photometric noise : < 0.00025 at 0.0 A, < 0.00050 at 1.0 A, < 0.00080 at 2.0 A, RMS at 260 nm; Photometric drift : < 0.0005 A/hr; Stray light : < 0.08% T at 220, 340 nm (NaI, NaNo ₂) < 1.0% T at 198-200 nm (KCL); Display : Graphical with LCD backlight 9.7 x 7.1 cm (3.8 x 2.8 in); Keypad : Sealed membrane with tactile response keys; Printer: 40 col internal (text/graphic); External USB printer (HP PCL 3.0 and greater); Connectivity : USB type A port for USB memory device (front panel); USB type B port for optional computer connectivity (rear panel); USB type A port for external printer (rear panel); Power requirements : Selectable automatically, 100-240 V, 50-60 Hz; Includes : Printer; US power cord, 6-position automatic cell holder, Single cuvette holder, full range scanning, fast scanning capability,	
		c. Wavelength accuracy ± 1 nm; Wavelength range 190 - 1100 nm; Wavelength reproducibility < 0.1 nm; Wavelength resolution 0.1 nm; Wavelength selection Automatic; Operating conditions 10 - 40 °C , max. 80%	

No	Nama Barang	Spesifikasi	Keterangan
		<p>relative humidity (not condensing) Operating mode Transmittance (%), Absorbance and Concentration, Scanning; Optical system Reference beam, spectral; Power supply Power cord, 100 - 240 V, 50 - 60 Hz; Pre-programmed methods > 240; Printer compatibility Supports most office deskjet printers; Quality assurance Function to schedule and document QA with pass/fall indication; Source lamp Tungsten (VIS), Deuterium lamp (UV); Specific technology RFID for easy method update, sample ID and Certificate of Analysis; Spectral bandwidth 2 nm; User programmes 200; Cuvette compatibility Rectangular: 10, 20, 30, 50 mm, 1 inch; round: 13 mm, 1 inch; Data storage 5000 measured values (Result, Date, Time, Sample ID, Operator ID); Display 7" TFT WVGA colour touchscreen; IBR+ Automatic test recognition, lot control and expiry date check; Includes 1 x Power Cord, 1x Universal-Adapter, 1x Dust Cover, 1x Printed multilingual basic user manual, LINK2SC Data exchange with SC 1000 controller</p>	
	d.	<p>Double beam spectrophotometer with highly stable optics; Variable spectral bandwidth 0.5, 1, 2, 4, 5nm; Integrated user interface; USB port for data storage; Wavelength range 190 to 1100nm; Wavelength resolution 0.1nm; Wavelength accuracy $\pm 0.3\text{nm}$ (at 0.5 and 1nm bandwidth) $\pm 0.5\text{nm}$ (at 2, 4 and 5nm bandwidth); Wavelength reproducibility \pm 0.2nm; Spectral bandwidth Variable 0.5, 1, 2, 4, 5nm; Photometric range - 0.3 to 3.0A 0 to 200%T; Photometric accuracy $\pm 0.002\text{A}$ (0- 0.5A) $\pm 0.3\% \text{ T}$ (0- 100%T); Photometric reproducibility $\pm 0.001 \text{ Abs}$ (0 to 0.5 Abs) $\pm 0.002 \text{ Abs}$ (0.5 to 1.0 Abs) 0.15%T (0- 100%T); Resolution 0.1%T, 0.001A; Stray light < 0.05%T at 220 and 360nm; Noise 0.0005A; Stability $\pm 0.001\text{A/h}$ at 500nm after 15 min warm up; Multi-wavelength Up to 10 wavelengths, up to 20 wavelengths with PC software; Calculations Ratio, difference, formulae with factors; Spectrum range Any range between 190 and 1100nm; Scan speed 100 to 2000nm/min; Scan interval 0.1, 0.2, 0.5, 1, 2 or 5nm; Analysis Auto peaks and valleys, zoom . Addition, subtraction, peak ratios, smoothing, area under curve, wavelength table, derivatives, overlay with PC software; Kinetics Up to 12 hours with time intervals of 0.1, 0.2, 0.5, 1, 2, 5, 10 or 30 seconds; Analysis Slope and formula of line of best fit between any two points; Quantitation points</p>	

No	Nama Barang	Spesifikasi	Keterangan
		<p>Up to 3 wavelengths; Quantitation Calibration Blank with up to 10 standards or factor; Concentration range 0- 99999; Calibration Blank with standards or factor; DNA/ RNA and Protein DNA/RNA Ratio, concentration, A320 correction; Light source Tungsten halogen and Deuterium lamps; Lamp changeover 325 to 370nm selec table; Outputs USB and parallel; Includes single 10x10mm cuvette holder in sample and reference position, instruction manual, power cables, PC software on CD ROM with USB connection cable and dongle, 4GB USB memory stick, 2 x quartz cuvettes, 4 x glass cuvettes and FREE dust cover and 230V power supply</p>	
		<p>e. 1) Wavelength Range: 190 nm – 1100 nm; Spectral Bandwidth: 1.0 nm; Resolution: 1nm; Stray Light: <0.1%T (220 nm, NaI; 340 NaNo₂), >=2.0Abs (KCl, 200nm); Wavelength Accuracy: 0.3nm; Wavelength Reproducibility: 0.2 nm</p> <p>2) Photometric System: The double-beam monitoring ratio system; Photometric Method: Transmittance, absorbance, energy and concentration; Photometric Range: -0.3~3.0 Abs; Photometric Accuracy: 0.002Abs (0~0.5A), 0.004Abs (0.5~1A), 0.3%T (0~100%T); Photometric Reproducibility: 0.001Abs (0~0.5A), 0.002Abs (0.5~1A), 0.15%T (0~100%T), Photometric Display: 0; Photometric Noise: 0.001Abs (500nm, 0Abs 2nm Spectral Bandwidth); Scanning Speed: 1400nm/min; Baseline Flatness: 0.0015 Abs (190-1100nm); Baseline Stability: 0.0008Abs/h (500nm, 0Abs 2nm Spectral Bandwidth, 2Hr. warm-up); Slew Rate of Wavelength: 3600nm/min</p> <p>3) DNA/RNA Measurement: Results Printout: Printing of measured data by using any Printer with Parallel Port connection available.</p> <p>4) Mainframe: Compact and standalone spectrophotometer mainframe; Light Source: Socket Deuterium Lamp and Socket Tungsten Halogen Lamp; Detector: Double Beam; Sample Chamber: 2 cell holder; Display Liquid Crystal Display (LCD 320 iA240 dot matrix); Keypad: Touch soft keys; PC Interface: RS-232; Includes 2 Auto Cell Holder, 8 Optical Glass Cells 10mm, 2 Quartz Cells 10mm, 1 Dust cover, 1 Power cable, 1 PC cable, 1 Software CD for Windows 98/2000/XP/7, 1 Software Operation Manual in 18 different languages, 1 Spare Tungsten Halogen Lamp, 1 Block Light Cell, 1 Extra fuse</p>	
3	Oven	<p>a. Volume 115L; Exhaust duct-outer 52mm; steam space volume 142L; Number of racks 2-5; Load</p>	

No	Nama Barang	Spesifikasi	Keterangan
		<p>per rack 15kg; Electronically-controlled APT.line™ preheating chamber technology with natural convection; Temperature range of 5 °C (9 °F) above ambient temperature up to 300 °C (572 °F); DS controller with integrated timer 0 to 99 hours; Digital temperature setting with an accuracy of one degree; One ramp function; Independent adjustable temperature safety device, Class 2 (DIN 12880) with visual temperature alarm; Adjustable ventilation by means of rear exhaust duct Ø 50 mm (2 inch) with ventilation flap and front ventilation slide; 2 chrome-plated racks; Air change at 150 °C 10x; Heating up time to 70 °C 15 Min, to 150 °C 29 Min, to 250 °C 66 Min; Nominal power 1600 W</p>	
	<p>b.</p>	<p>Operating temperatures from 50° to 250°C; Automatic over-temperature alarm system; Low overall energy consumption; Built in timer; Corrosion-resistant stainless-steel chambers with rounded corners; Large, easy to read vacuum fluorescent display; Easy to use, microprocessor-controlled touch button operation; Doors can be opened over 180°C; Capacity (Metric) 105L Depth (English) Interior 16.3 in. Depth (Metric) Interior 41.5cm Dimensions (D x W x H) Interior 16.3 x 17.2 x 22.8 in. (41.5 x 43.8 x 58cm) Dimensions (L x W x H) Exterior 22.2 x 25.2 x 32.3 in. (56.5 x 64 x 82cm) Height (English) Exterior 32.3 in. Height (English) Interior 22.8 in. Hertz 50/60Hz Height (Metric) Exterior 82cm Height (Metric) Interior 58cm Length (English) Exterior 22.2 in. Length (Metric) Exterior 56.5cm Shelves 2 supplied/ 16 max. Temperature Control Microprocessor control with vacuum fluorescent display Timer ON / OFF Temperature Stability ±0.4°C Voltage 230V Width (English) Exterior 25.2 in. Wattage 3100w Width (Metric) Exterior 64cm Width (English) Interior 17.2 in. Width (Metric) Interior 43.8cm Electrical Requirements 230V 50/60Hz</p>	
	<p>c.</p>	<p>Textured Stainless Steel Casing: w x h x d: 745 x 867 x 584 mm, fully insulated stainless steel door with 2-point locking (compression door lock), rear zinc-plated steel; Interior - Heating Concept: w x h x d: 560 x 480 x 400 mm, 108 l, easy-to-clean interior,made of stainless steel,reinforced by deep drawn ribbing with integrated and protected large-area heating on four sides: · 2 stainless steel grids, · Max. loading of chamber: 175 kg; Temperature Range: · min. 5°C above ambient up to +300°C Voltage / Power Rating, · 230 V (+/- 10%), 50/60 Hz / approx. 2.800 W, · 115 V (+/-</p>	

No	Nama Barang	Spesifikasi	Keterangan
		10%), 50/60 Hz / approx. 2.200 W	
4	Incubator	<p>a. Control COCKPIT adaptive multifunctional digital PID-microprocessor controller with high-definition TFT-colour display Temperature 1 Pt100 sensor DIN class A in 4-wire-circuit Timer Digital backwards counter with target time setting, adjustable from 1 minute to 99 days temperature range in °C min. 5°C above ambient up to +80°C Door inner glass door Internals 1 stainless steel grids Scope of delivery incl. works calibration certificate for +37°C Housing rear zinc-plated steel Interior easy-to-clean interior, made of stainless steel, reinforced by deep drawn ribbing with integrated and protected large-area heating on four sides Volume 55 L</p> <p>b. Natural Convection; Volume 53L; Steam space volume 70L; Racks number 2; Load per rack (kg) 15; Temperature range 5 °C above ambient up to 100 °C; Temperature variation at 37 °C + 0.5 °C, at 50 °C + 1.1 °C; Temperature fluctuation at 37 °C + 0.1 °C, at 50 °C + 0.1 °C; Heating up time to 37 °C 38 min, to 50°C 59 min (up to 98% of the set value); Recovery time after door was opened 30 sec at 37 °C 5 min, at 50°C 7 min; Housing Protection acc. to EN60529 IP20; Nominal Power 400W; Electronically controlled APT.line™ preheating chamber technology; DS controller with integrated timer 0 to 99 hours; Digital temperature setting with an accuracy of a tenth of a degree; Independent adjustable temperature safety device, Class 3.1 (DIN 12880), with visual alarm; Adjustable ventilation by means of rear exhaust duct, 50 mm (2 inch) diameter with ventilation flap and front ventilation slide; Inner glass door; RS 422 interface for communication software APT-COM™ DataControlSystem; 2 chrome-plated racks</p>	
5	Autoclave	<p>a. Chamber Volume : 50L working, 60L actual volume; Operating Range 105°C to 135°C; Sterilization 1 to 300 minutes; Outside Dimensions (WDH) : 455 x 691 x 890 mm; Chamber Dimensions dia.x H : 364 x 482 mm; Maximum allowable pressure : 0.26Mpa; Media warming/ holding temperature : Programmable 45°C to 60°C to keep media warm up to 24 hours; Auto-start timer : Initiate a cycle 1 to 99 hours later; Cooling fan : Switch to turn fan on or off; Air removal timer : Programmable, 3 to 9 minutes after temperature has reached 97°C; Steam venting : Selectable from : no venting and three other venting rates; Temperature for</p>	

No	Nama Barang	Spesifikasi	Keterangan
		release of lid interlock : Programmable, 60°C to 97°C; Sterilization program cycles : 1. Liquid cycle; 2. Agar cycle (Liquid with warming); 3. Solid cycle (3 program for each cycle); Additional cycle for agar dissolution : cycle for dissolving and keeping agar warm (no sterilization); Safety features : circuit breaker with GFCI, low power cut off, over-temperature power cut off, over-pressure power cut off, safety valve, sensor for improper lid closing; Steam Condenser : 15-liter water tank; Drain water bottle : 2 liter; Net weight : 62 Kg; Power source : 220/230V, 50/60, Hz single phase; Power consumption 2kW; With one-touch auto open/ lock lid; Include : 2 pcs SS wire basket; Drain bottle; Heater cover; 2 pcs caster stopper	
		b. Operating temperature range : Sterilizing : 105~135°C (0.019MPa~0.212MPa), Heating : 45~104°C (0~0.015MPa), Warming : 45~95°C Maximum operating pressure : 0.263MPa Temperature display : digital Pressure gauge display : Analog , range 0~0.4MPa Heat source : 2.0 kW electric heater Chamber capacity : Effective internal volume : 50 L Internal volume of the chamber : 58 L Chamber material : SUS304 Dimensions (mm) : 410W, 477D, 970H	
		c. Fast, 35 minute sterilizing cycle; Complete and Effective Sterilization at an Affordable Price; Heavy Cast Aluminum Cover and Bottom Construction; Aluminum Alloy Seamless Inset Container Cast Aluminum Rack; Flexible Metal Exhaust Tube; 3 Wire Grounded Plug for Safety; Calibrated Gauge that shows when sterilization cycle begins; Safety locking mechanism that prevents opening while the sterilizer is under pressure; Easy Steam Release Switch; Excess Pressure Relief Valve for Safety; Light, compact, portable and robust, top loading sterilizer; Cover alignment arrows; Lubricated Metal-to-Metal Seal which means; NO GASKETS TO REPLACE OR WEAR OUT; 240 Volts, 50/60 Hz, 1050 Watts / 4.38 Amps; Gross Capacity: 25 qt / 24 liters; Overall Height: 16¾ inches / 42.5 cm; Bottom Height: 12½ inches / 31.2 cm; Inside Diameter: 12½ inches / 32.1cm; Unit Weight: 26 lbs / 11.8 kg; Inner container: Height: 8½ inches / 21.6 cm, Diameter: 11 inches / 28.3 cm, Capacity: 14.5 qt / 13.7 liters, Volume: 835 in³ / 13 688 cm³	

C1.4. LABORATORIUM FISIKA

No	Nama Barang	Spesifikasi	Keterangan
1	Osiloskop	a. Analog Oscilloscope; 30/20 MHz Bandwidth, Dual Channel; TV Synchronization; High Sensitivity 1mV/div; Z-Axis Input; ALT Triggering Function; CH1 Output	
		b. 20 Mhz Dual Channel; Sensitivitasvom Vos-620 Dual Channel Analog Oscilloscope (20Mhz); High Sensitivity 1Mv / Div; Added Z Axis; Output Ch1; 10 Times Sweep Magnification; Sync Tv, X-Y Mode; High Luminance, Internal Graticule Crt Toshiba; Japanese Electronic Encoder, Light, Portable And Reliable; Switch Mode Vertical-Coated Durable Full; Alt Triggering Function. Two Independent Signals Simultaneously Observation; Level Triggering Lock Function; Automatic Synchronization Functions	
		c. Analog Oscilloscope; Dual Channel 20MHz; 10 Times Sweep Magnification; TV Synchronization : X-Y mode; Japanese encoded Switch, Reliable and Durable; High Illumination Internal Graticule CRT; Fully sealed durable attenuation Switch; ALT triggering Function	
3	Mechanics Experiments	a. Comprehensive Mechanics System: Force Accessory Bracket Mini Rotational Accessory Cart Adapter Accessory Compact Cart Mass (2) Pi Set Time-of-Flight Accessory Photogate Mounting Bracket Mini Launcher Dynamics Cart Magnetic Damping Mini Ballistic Pendulum Accessory Spring Cart Launcher 1.2 m PAScar Dynamics System Super Fan Cart Density Set Discover Friction Accessory Large Rod Base 45 cm Stainless Steel Rod 90 cm Stainless Steel Rod Picket Fences (Smart Timer) (2) Mass and Hanger Set Elastic Bumper IDS Spring Kit Picket Fence Large Table Clamp Photogate Head (2) Pendulum Clamp Multi-Clamp (2) Car Sail Variable Speed Motorized Cart Centripetal Force Pendulum PASPORT Motion Sensor (2) PASPORT 3-Axis Accelerometer/Altimeter PASPORT Rotary Motion Sensor PASPORT High Resolution Force Sensor (2) Pulley Mounting Rod No-Bounce Pad Braided Physics String Comprehensive Physics System Experiment Manual	
		b. Free Fall (with sensor-pc interface) : Forked light barrier; g ladder; Multi-core cable, 6-pole, 1.5 m; Sensor-PC interface; Software; Timer S	
		c. Newton 2nd Law, one-dimensional motion (with pc-interface); Additional weights, pair; Combination spoked wheel; Connecting lead	

No	Nama Barang	Spesifikasi	Keterangan
		19 A, 100 cm, red/blue, pair; Fishing line, 10 m, set of 2; Holder for combination spoked wheel; Holding magnet; Laser motion sensor S; Newton weights; Sensor-PC interface; Slotted mass hanger 10 g, small; Slotted weight 10 g, grey; Software; Stand base V-shape, small; Track, 1.5 m; Trolley	
		d. Collision Law - elastic collision (with photogate and pc-interface): Additional weights, pair; Combination light barrier; Impact spring for track; Multi-core cable, 6-pole, 1.5 m; Sensor-PC interface; Software; Timer S; Track, 1.5 m; Trolley	
		e. Moment of inertia and Steiner's theorem: Ball for torsion axle; Circular disc for torsion axle; Cylinders for torsion axle, set; Hand-held stop watch I, mechanical; Stand base V-shape, small; Torsion axle	
		f. Mechanical conservation of energy: Counter S; Forked light barrier; Holding magnet adapter with a release mechanism; Maxwell's wheel; Multiclamp; Multi-core cable, 6-pole, 1.5 m; Saddle Base; Scale with Pointers; Stand base MF; Stand rod 100 cm, 12 mm Ø; Stand rod 50 cm, 10 mm Ø; Support block	
		g. Modulus of Elasticity (Young Modulus): Copper wire, 0.2 mm Ø, 100 m; Force sensor S, ±50 N; Iron wire, 0.20 mm Ø, 100 m; Multiclamp; Rotary motion sensor S; Sensor-PC interface; Simple bench clamp; Software; Stand rod 100 cm, 12 mm Ø; Stand rod 25 cm, 10 mm Ø; Steel tape measure, l = 2 m/78"	
4	Thermodynamics/Waves Bundle Experiments	a. Comprehensive Thermodynamics/ Waves Bundle: Sound Sensor Energy Transfer - Calorimeter Precision Diffraction Slits Basic Optics Geometric Lens Set Concave/Convex Mirror Green Diode Laser Basic Optics Viewing Screen Basic Optics Ray Table Basic Optics Light Source Adjustable Lens Holder Adjustable Focal Length Lens Color Mixer Accessory Kit Color Mixer 1.2 m Optics Track -- Basic Optics Ray Optics Kit Accessory Lens Set - Basic Optics Diode Laser -- Basic Optics Polarization Analyzer -- Basic Optics Linear Translator -- Basic Optics PASPORT Absolute Pressure Sensor PASPORT Quad Temperature PASPORT High Sensitivity Light Sensor Resonance Boxes: Sympathetic Resonance Box Set Banana Plug Cord-Red (5 Pack) Radiation Cans Absolute Zero Sphere Ideal Gas Law Apparatus Economy Resonance Tube String Vibrator Open Speaker (WA-9900)	

No	Nama Barang	Spesifikasi	Keterangan
		c. Simple pendulum: Multiclamp; Physical pendulum; Rotary motion sensor S; Sensor-PC interface; Software; Stand base MF; Stand rod 25 cm, 10 mm Ø; Stand rod 50 cm, 10 mm Ø	
		d. Continuous transverse wave: Attenuator for wave machine; Build-in brake for wave machine; Connecting lead 19 A, 100 cm, black, pair; Connecting lead 19 A, 100 cm, red/blue, pair; Connecting lead 19 A, 50 cm, black, pair; Drive module for wave machine; Hand-held stop watch I, mechanical; Low-voltage power supply; Steel tape measure, l = 2 m/78"; Transformer 2 to 12 V, 120 W; Wave machine, basic module 1	
		e. Acoustic Doppler effect: AC-amplifier; Accessories acoustic Doppler effect; Battery 1.5 V (AA), set of 4; Clamp rider, 5 pieces; Connecting lead 19 A, 100 cm, red/blue, pair; Connecting lead, protected, 8 m; Counter S; Feet for metal rails, pair; Generator 40 kHz; Hand-held stop watch I, mechanical; Multiclamp; Oscilloscope 40 MHz, two-channel, analogous; Precision metal rail, 1 m; Rail connector; Saddle Base; Screened cable BNC/4 mm plug; Set 6 two-way adapters, black; Stand base V-shape, small; Stand ring with clamp, 70 mm Ø; Stand rod 25 cm, 12 mm Ø; Stand rod 75 cm, 12 mm Ø; Trolley with electric drive; Ultrasonic transducer 40 KHz	
		f. Equation for ideal gases: Beaker DURAN, 250 ml, squat; Clamp with jaw clamp; Gas thermometer; Hand vacuum pump; Hot plate; Mobile-PC interface; NiCr-Ni adapter S, Type K; Stand base V-shape, small; Stand rod 47 cm, 12 mm Ø; Temperature probe NiCr-Ni, 1.5 mm, Type K	
		g. Heat capacity for gases: Aneroid barometer; Connecting lead 19 A, 100 cm, red/blue, pair; Connecting lead 19 A, 50 cm, blue Connector, straight, PP, 4 ... 15 mm diam. Fine regulating valve for Minican gas cans Function generator P Gas elastic resonance apparatus Hand-held stop watch I, mechanical Minican gas can, Carbon dioxide Minican gas can, Neon Multimeter analog Oscillation tube with Mariotte's bottle Plastic beaker, 1000 ml Rubber tubing, 1 m x 4 mm diam. Silicone tubing, 7 mm diam., 1 m Stand base V-shape, small Three-way valve, T-shaped, ST nozzles	

No	Nama Barang	Spesifikasi	Keterangan
		Vaseline, 50 g	
		h. Heat Demonstration Kit: Alat peraga yang digunakan untuk mempelajari tentang panas.	
		i. Laser Geometry Optical Experiments: Alat peraga yang digunakan untuk mempelajari tentang sifat-sifat cahaya.	
		j. Optics Kit: Alat peraga yang digunakan untuk mempelajari tentang sifat-sifat cahaya dan benda optik.	
5.	Electromagnetism Experiments	a. Comprehensive Electromagnetism Bundle: Alnico Bar Magnets (2 Pack) Zero Gauss Chamber AC/DC Electronics Laboratory Faraday Ice Pail Charge Producers and Proof Plane Conductive Spheres Conductive Shapes Electrostatics Voltage Source Basic Electrometer Basic Variable Capacitor Field Mapper Kit PASPORT 2-Axis Magnetic Field Sensor PASPORT Current Probe Banana Plug Cord Sets, 30 cm Length Plotting Compass Set (20 pack) Dip Needle Voltage Sensor (unshrouded) BNC Function Generator Output Cable (unshrouded) Resistor Capacitor Inductor Network (UI-5210)	
		b. Electron Beam Demonstrator: Alat yang digunakan untuk peragaan/demonstrasi mengenai fenomena electron beam	
		c. Ohm's Law : AC/DC Power supply 0 - 12 V; Apparatus for resistance measurement; Connecting lead 19 A, 100 cm, red/blue, pair; Connecting lead 32 A, 100 cm, black; Connecting lead 32 A, 25 cm, black; Multimeter analog	
		d. Impedance and phase shift: Capacitor 0.1 μF ; Capacitor 1 μF ; Capacitor 10 μF ; Capacitor 4.7 μF ; Coil 1000 turns; Coil 500 turns; Connecting lead 19 A, 100 cm, red/blue, pair; Function generator S 12; Oscilloscope 40 MHz, two-channel, analogous; Plug-in board; Resistor 1 Ohm; Resistor 10 Ohm; Resistor 100 Ohm; Screened cable BNC/4 mm plug	
		e. Law of image: Aspherical condenser with diaphragm holder; Bulb 6 V/30 W, E14, set of 2; Lamp housing with cable; Lens in frame, $f = +100$ mm; Lens in frame, $f = +150$ mm; Lens in frame, $f = +200$ mm; Lens in frame, $f = +300$ mm; Lens in frame, $f = +50$ mm; Lens in frame, $f = -100$ mm; Multiclamp; Objects for investigating images, pair; Plane mirror 14 cm x 9 cm, with ball joint; Screen, translucent; Small optical bench; Stand base V-shape, small; Steel tape measure, $l = 2$ m/78"; Transformer 6/12 V	

No	Nama Barang	Spesifikasi	Keterangan
		f. Balmer series and Rydberg's constant: Adjustable slit; Balmer lamp; Holder with spring clips; Lens in frame, $f = +100$ mm; Lens in frame, $f = +50$ mm Multiclamp; Power supply unit for the Balmer lamps; Ruled grating 6000/cm (Rowland); Screen, translucent; Small optical bench; Stand base V-shape, large Steel tape measure, $l = 2$ m/78"	
		g. Electromagnetism Demonstration Kit: Alat peraga yang digunakan untuk mempelajari tentang sifat elektromagnet.	
		h. Ring Launcher Experiment Kit: Alat peraga yang digunakan untuk mempelajari tentang induksi elektromagnet pada Hukum Lenz's	

C2. LABORATORIUM BAHASA

No	Nama Barang	Spesifikasi	Keterangan	
1	Lab Bahasa Multimedia	a.	Kapasitas 24 Siswa; Software Lab Bahasa Komputer: WinnerClass Premium for Master, WinnerClass Premium for Student; Komputer Master HP Series Core i3 + LCD 18.5"; Komputer Siswa HP Series Dual Core + LCD 15.6"; Headset Guru WinnerTech MA 888 MV; Webcam A4 tech PK-7MAA; Printer Canon MP 287; Projector EPSON EB X-100; Document Camera Aver Vision U15; Master Control Multimedia; WinnerTech CC1000; Educational Recorder WinnerTech ER2000; Interactive Whiteboard Simply Board FTC-80; Stabilizer Krisbow Pro Red SVC 10.000VA; Headset Siswa WinnerTech MA 888 MV; Meja Master WinnerTech U-sheet Kayu; Meja Siswa Single WinnerTech SCS001; Kursi Master Index Council 8110; Room Speaker Polytron PAS 67; Karpet Jawa Nobel; Box Stage WinnerTech; Cabling Installation WinnerTech; Instalasi & training WinnerTech; Switch Hub D-LINK D45; Kursi Siswa Putar Isabel KP 333 T	
		b.	Kapasitas 24 Siswa; Software Lab Bahasa Komputer: WinnerClass Premium for Master, WinnerClass Premium for Student; Notebook + Windows 7 HP Probook 4431s Core i5; Headset Guru WinnerTech MA 888 MV; UPS Krisbow Pro Red SVC 10.000VA; Netbook + Windows 7 Hp mini 110-3517TU; Headset Siswa WinnerTech MA 888 MV; Meja Master WinnerTech U-Sheet kayu; Meja Siswa Single WinnerTech SCS001; Kursi Master Ushinto 5130; Kursi Siswa Putar Isabel KP 333 T; Room Speaker Polytron PAS 67; Wireless Router Linksys WRT54GL; Instalasi & Training WinnerTech	
		c.	Master Side: Master Kontrol + Software MGLab; Komputer Master Core i3 3240; Master Tape Deck Polytron; Headset teacher MG 888MV; UPS 600 VA APC / ProLink; Mic Wireless Shure/sejenis; Meja Master MGLab; Kursi Master MGLab; Audio Recording & Playback Adapter with USB Port/SD card Media/Sejenis; Document Camera Evert /Avermedia; Mouse pen tablet Genius; Central Control Media / Evert CMC Student Side: Capacity 24 Students; Student Console MGLab SC-501; Headset Siswa MG 888MV; Meja Siswa (twinbooth) MGLab; Student Chair Fortuner / Brother; Audio Recording & Playback Adapter with USBPort/SD card Media/Sejenis Lain-Lain: Instalasi Kabel Audio dan Power MGLab; Karpet plus pemasangan; Room Speaker MGLab; Box Stage Kabel dan Box Stage Master MGLab; Parabola + Digital Receiver With TV Record Venus/sejenis; Smartboard Multitouch Evert IWB;	

No	Nama Barang	Spesifikasi	Keterangan
		Pendingin Ruangan (AC) LG/Sejenis 1 PK; Internet Modem Huawei; LCD ProJektor 2500 lumens + Wall Screen + pasang Benq. Included: Student Console + Evaluator Quiz with keyboard and LCD Display	

C3. PERALATAN PENDIDIKAN DAN TIK

No	Nama Barang	Spesifikasi	Keterangan
1	Personal Komputer	a. Desktop PC, Intel Core i5-4590 Processor (3.3 GHz, 6M Cache) up to 3.70 GHz, 4GB DDR3, 1TB HDD, DVDRW, VGA Intel HD Graphics, NIC, Win 7 Pro, LED 18.5. Power Supply 350W; USB Mouse; Audio Integrated; USB Keyboard; Networking Integrated; 8 in 1 Media Reader; Micro Tower ATX; Antarmuka / Interface: 2 X USB 3.0, 2 X USB 2.0, 1 x Microphone Port, 1 x Headphone, 2 X USB 3.0, 4 X USB 2.0, 2 x PS/2, 1 x D-Sub, 1 x DVI-I, 2 x Disply Port, 1 x 8 Channel Audio (3 ports), 1 X RJ45 LAN, 1 x Parallel Port, 1 x COM Port (Serial Port), Chipset Intel B85; Included : Office Home and Business 2016 32-bit/x64 English APAC EM DVD	
		b. Desktop PC, Intel Core i5-4590s Processor (6M Cache, 3.0 GHz up to 3.60GHz), 4GB DDR3 PC3-12800 (Max16GB, 4 DIMM Slots), 1TB HDD, DVD±RW, VGA Intel HD Graphics, GbE NIC, Win 7 Pro, LED 18.5, Chipset Intel® Q85, Memori Slot 4; Audio Integrated; Networking Integrated; Kecepatan Jaringan 10 / 100 / 1000 Mbps; Keyboard Wired Keyboard; USB Optical Mouse; 1x PCI, 2x PCI-ex1, 1x PCI-ex16, Front - USB: (2) USB 3.0, Microphone: 1, Headphone: 1, Rear - Microphone: 1, Headphone: 1, Rear - USB: (4) USB 2.0, (2) USB 3.0, Rear - Display (Output): (1) VGA, (2) DP, Rear - PS/2: 2 (1 for Keyboard, 1 for Mouse) x Optional, Rear - Serial: (1) Standard, (1) Optional, Rear - Parallel: (1) Optional, LAN (RJ45): 1, Rear - Audio: 3 (Line in / Line out / Mic), Micro Tower ATX, Daya / Power 280 W, Included : Office Home and Business 2016 32-bit/x64 English APAC EM DVD	
		c. Desktop PC, Intel Core i5-4590 Processor Up To 3.7Ghz, 6MB), 4GB DDR3, 500GB HDD, VGA Intel HD Graphics 4600, NIC, Win7 Pro 64bit, LCD 18.5" Widescreen With LED, 4 External USB 3.0 ports (2 front, 2 rear) and 6 External USB 2.0 ports (2 front, 4 rear) and 1 Internal USB 2.0 (MT only), 1 RJ-45, 1 Serial, 1 VGA, 2 DisplayPort, 2 PS/2, 2 Line-in,	

No	Nama Barang	Spesifikasi	Keterangan
		Integrated Realtek RTL8151GD Ethernet LAN 10/100/1000, Intel Q87 Express Chipset, Included : Office Home and Business 2016 32-bit/x64 English APAC EM DVD	
		d. Desktop PC, Intel® Core i5-4590 Processor (3.3 GHz, 6M cache) up to 3.70 GHz, 4GB DDR3, 1TB HDD SATA, DVD±RW, Audio, NIC, VGA Intel HD Graphics 4600, Win 7 Pro 64bit, LED 18.5. Realtek RTL8151GH Network Connection, 15 in 1 MCR, Pararel & Serial Port, USB 2.0 FRONT 2 + REAR 4, USB 3.0 Front 2, 3xPCI Express x1, 1xPCI Express x16, USB KB + Mouse, Memori Slot (2)DIMM up to 16GB, Small Form Factor ATX, Daya / Power 240w, Chipset H81, Included : Office Home and Business 2016 32-bit/x64 English APAC EM DVD	
2	Notebook/Laptop	a. Intel Core i5-6200U Processor (2.3 GHz, 3M Cache) up to 2.80 GHz, 4 GB DDR3L, Kapasitas Penyimpanan 1 TB HDD, Nvidia GeForce 940M 2GB, Wireless Network Type Integrated, Kecepatan Jaringan 10/100 Mbps, Wireless Network Protocol IEEE 802.11b, IEEE 802.11g, IEEE 802.11n, DVDRW, Keyboard Standard Keyboard, Ukuran Layar 14.0 Inch, Bluetooth 4.0, Baterai 4 Cell, Daya / Power 65 W AC power adapter, Speaker Integrated, 2x USB 3.0, 1x USB 2.0, HDMI, RJ-45, headphone/microphone combo, Tipe Layar LED Backlit (Touchscreen), Ragam Input Device Touchpad, Resolusi Layar 1366 x 768, CPU Brand INTEL, Berat 1.96 kg, Win 10, FREE Branded Backpack. Included : Office Home and Business 2016 32-bit/x64 English APAC EM DVD	
		b. Intel(R) Core (TM) i5-6200U Processor (3M Cache, up to 2.80GHz), Wireless Network Type Integrated, 500 GB HDD, Speaker Integrated, Tipe Layar LED Backlit, Daya / Power 65W AC Adapter, Resolusi Layar 1366 x 768, Baterai 4 Cell, Ukuran Layar 14 Inch, Tipe Grafis AMD Radeon (TM) R5 M335 2GB DDR3, Standard Keyboard, 4 GB DDR3L, Wireless Bluetooth Integrated, CPU Brand INTEL, Win 10. Included : Office Home and Business 2016 32-bit/x64 English APAC EM DVD	
		c. Intel® Core™ i5-6200U Processor (2.3 GHz, 3M Cache) up to 2.80 GHz, 4GB DDR3, NVIDIA® GeForce® GT930M 2GB, 14 Inch, Resolusi Layar 1366 x 768, LED backlight, Audio Integrated, Speaker Integrated, Kapasitas Penyimpanan 500 GB HDD, DVD±RW, Networking Integrated, Wireless Network Type Integrated, Wireless Network Protocol IEEE 802.11b, IEEE 802.11g, IEEE 802.11n, Integrated Bluetooth 4.0, Standard Keyboard, Touch Pad, 1x USB 3.0, 2x USB 2.0, HDMI, Baterai 2 Cell, Free	

No	Nama Barang	Spesifikasi	Keterangan
		Carrying bag. Included : Win 10 + Office Home and Business 2016 32-bit/x64 English APAC EM DVD	
3	UPS	<p>a. Back-UPS, UPS 625VA / 325W, 230V, UPS with AVR, ASEAN</p> <p>b. UPS CE 600 kapasitas 600 VA</p> <p>c. Line Interactive, 650VA, 230VAC, Touch Screen Panel, Speed charging</p>	
4	Projector	<p>a. Projection Technology RGB liquid crystal shutter projection system (3LCD); LCD: Size 0.55" (D8), Native Resolution XGA; Projection Lens: Type Optical Zoom (Manual) / Focus (Manual), F-Number 1.58 - 1.72, Focal Length 16.9 - 20.28 mm, Zoom Ratio 1.0 - 1.2, Throw Ratio 1.48 - 1.77 (Wide - Tele); Lamp Type 200W UHE; Life (Normal/Eco) 5,000 hours / 10,000 hours; Screen Size (Projected Distance) Zoom: Wide 30" - 300" [0.9 - 9.0 m], Zoom: Tele 30" - 300" [1.08 - 10.8 m], Standard Size 60" screen 1.8 - 2.17 m; Brightness Colour Light Output 2,800lm; White Light Output (Normal) 2,800lm/1,960lm, Contrast Ratio 15,000:1; Internal Speaker(s) Sound Output 1W Monaural; Keystone Correction Vertical / Horizontal $\pm 30^\circ$ / $\pm 30^\circ$, Auto Keystone Correction Yes (Vertical only), Horizontal Slide Keystone Correction Yes, Quick Corner Yes, Connectivity Analog Input D-Sub 15 pin, 1 (Blue molding), Composite RCA x 1 (Yellow), S-Video 1, Digital Input HDMI 1 (MHL not supported), Audio Input 2 RCA (White/Red) 1, USB Interface USB Type A 1 (for USB Memory, Document Camera, Wireless LAN, Firmware Update), USB Type B 1 (for USB Display, Mouse, K/B, Control, Firmware Update); Wireless Specifications Supported Speed For Each Mode, IEEE 802.11b: 11 Mbps, IEEE 802.11g: 54 Mbps, IEEE 802.11n: 130 Mbps, Wireless LAN Security WPA-PSK/WPA2-PSK(TKIP/AES), WPA2-PSK(AES) (Optional Wireless LAN Unit use), Supported Connection Mode Infrastructure, Access Point; Operating Temperature 5 - 35 °C <41 - 95 °F> (0m / 0ft - 2,286m / 7,500ft) 5 - 30 °C <41 - 86 °F> (over 2,286m / 7,500ft) (20% - 80% humidity, No condensation); Operating Altitude 0 - 3,000 m <0 - 9,843 ft> (over 1,500m / 4,921ft: with high altitude mode); Direct Power On / Off Yes; Start-Up Period About 6 seconds, Warm-up Period: 30 seconds; Cool Down Period Instant Off; Air Filter; Maintenance Cycle 5,000 hours / 10,000 hours (Power consumption: Normal / Eco); Power Supply Voltage 100 - 240 V AC $\pm 10\%$, 50/60 Hz; Power Consumption (220 - 240V) Lamp On (Normal / Eco) 277W / 207W; Standby (Network On / Off) 2.4W / 0.26W; Fan</p>	

No	Nama Barang	Spesifikasi	Keterangan
		<p>Noise (Normal / Eco) 37dB / 28dB</p> <p>b. Display Panel : 3 x 0.63" P-Si TFT LCD Panel; Brightness : 2700 ANSI Lumens; Resolution : XGA (1024 x 768 pixels); Contrast Ratio : 2000 : 1; Screen Size : 30 – 300 Inches Diag.; Throw Ratio : 1.5 – 1.8 : 1; Lamp Wattage : 215 Watt UHB Lamp; Lamp Life : 5000 H / 6000 H (Eco Mode); Filter Cleaning Time : 2000 Hours (Urethane) Input Connector : 1 x Computer (D-sub 15 pins); 1 x D-sub 15 pins shared computer (Component Video); 1 x RCA Jack (Composite Video); 1 x Stereo Audio (mini jack); Output Connector : No; Speaker : 1 Watt (Mono) Technology & Features : Digital Gamma Corrections - Manual V. Keystone Corrections, Quick Start Up & Instant Off - Blackboard / Whiteboard Mode, Input Source Naming - Keypad Lock, My Text & Keypad Lock - Template Functions, Blank Button - PIN – Lock (password), My Screen / User Logo - Security Bar & Kensington Slot, Lamp Door on Top, Noise Level : 37 dB / 29 dB (Whisper Mode), Power Used : 300 Watt</p>	
		<p>c. 3 LCD system; Size of effective display area 0.63" (16 mm) x 3 LCD Panel, Aspect ratio: 4:3; Number of pixels 2,359,296 (1024x768 x 3) pixels; Projection lens: Focus Manual, Zoom - Powered/Manual Manual; Zoom - Ratio Approx. x 1.2; Throw Ratio 1.47:1 to 1.77:1; Ultra high pressure mercury lamp, Wattage 210 W type, Recommended lamp replacement time Lamp mode: High 3000 H, Lamp mode: Standard 4500 H, Lamp mode: Low 6000 H, Filter cleaning / replacement cycle (Max.) 1000 H (cleaning), Screen size 30" to 300" (0.76 m to 7.62 m)(measured diagonally), Light output Lamp mode: High 2300 lm, Lamp mode: Standard 1800 lm, Lamp mode: Low 1500 lm, Color light output Lamp mode: High 2300 lm, Lamp mode: Standard 1800 lm, Lamp mode: Low 1500 lm; Contrast ratio (full white / full black) 3000:1; Speaker 1 W x 1 (monaural); Displayable scanning frequency Horizontal 19 kHz to 92 kHz, Vertical 48 Hz to 92 Hz; Maximum display resolution: UXGA 1600 x 1200 dots, Video signal input NTSC, PAL, SECAM, 480/60i, 576/50i, 480/60p, 576/50p, 720/60p, 720/50p, 1080/60i, 1080/50i; The following items are available for digital signal (HDMI input) only; 1080/60P, 1080/50p; Color system NTSC3.58, PAL, SECAM, NTSC4.43, PAL-M, PAL-N; Keystone correction (Max.) Vertical +/- 30 degrees; OSD language 23-language (English, French, German, Italian, Spanish, Portuguese, Japanese, Simplified</p>	

No	Nama Barang	Spesifikasi	Keterangan
		<p>Chinese, Traditional Chinese, Korean, Russian, Dutch, Norwegian, Swedish, Thai, Arabic ,Turkish, Polish, Vietnamese, Farsi, Finnish, Indonesian, Hungarian); INPUT OUTPUT (Computer/Video/Control), INPUT A RGB / Y PB PR input connector: Mini D-sub 15-pin (female), Audio input connector: Stereo mini jack (shared with VIDEO IN), INPUT B HDMI input connector: HDMI 19-pin, HDCP support, VIDEO IN Video input connector: Pin jack, Audio input connector: Shared with INPUT A; Acoustic noise Lamp mode: Low < 35 dB; Operating temperature / Operating humidity 0°C to 35°C (32°F to 95°F) / 20% to 80% (no condensation); Storage temperature / Storage humidity - 10°C to +60°C (14°F to +140°F) / 20% to 80% (no condensation); Power requirements AC 100 V to 240 V, 2.9 A to 1.2 A, 50 Hz / 60 Hz; Power consumption AC 220 V to 240 V Lamp mode: High: 277 W; Power Consumption (Standby Mode)AC 220 V to 240 V 0.5 W (when "Standby mode" is set to "Low"); Heat dissipation AC 220 V to 240 V 943 BTU/h</p>	
	d.	<p>Projection System DLP; Native Resolution XGA(1024 x 768); Brightness (ANSI Lumens) 3000; Contrast Ratio 13000:1; Display Color 1.07 Billion Colors; Lens F=2.56-2.8, f=21-23.1mm; Aspect Ratio Native 4:3 (5 aspect ratio selectable); Throw Ratio 1.86-2.04 (53"@2m); Image Size (Diagonal) 30"-300"; Zoom Ratio 1.1:1; Lamp Type 190W; Lamp Mode (Normal/Economic) 4500/6000/6500/10000/NA hours; Keystone Adjustment 1D, Vertical ± 40 degrees; Projection Offset 120% ±5%; Resolution Support VGA(640 x 480) to UXGA(1600 x 1200); Horizontal Frequency 15-102KHz; Vertical Scan Rate 23-120Hz; HDTV Compatibility 480i, 480p, 576i, 576p, 720p, 1080i, 1080p; Video Compatibility NTSC, PAL, SECAM; Interface Computer in (D-sub 15pin) x 2(Share with component), Monitor out (D-sub 15pin) x 1, Composite Video in (RCA) x 1, S-Video in (Mini DIN 4pin) x 1, Audio in (Mini Jack) x 1, Audio out (Mini Jack) x 1, Speaker 2W x 1, USB (Type Mini B) x1 (Download & page/down), RS232 (DB-9pin) x 1, IR Receiver x1 (Front), Dimensions (W x H x D mm) 283 x 95 x 222, Weight 1.8kg (3.96lbs), Audible Noise (Normal/Economic Mode) 33/28 dBA, Power Supply AC100 to 240 V, 50 to 60 Hz, Power Consumption 270W (Normal), 220W (Eco) Standby<0.5W</p>	
	e.	<p>BrilliantColor™ Technology; Short-throw lens for large, stunning images in small spaces; Off To Go feature; Advanced DLP™, Seamless expression of images; Digital Keystone</p>	

No	Nama Barang	Spesifikasi	Keterangan
		Correction: $\pm 40^\circ$, adaptivity in any given environment; Network control through RJ45; Crestron RoomView; Type 0.55" Digital Micromirror Device (DLP™); Resolution 1024x768, 1600x1200, (compressed); Lens Fixed Lens/Manual focus; Size 30 - 300 inch; Throw Distance 0.4m - 3.7m; Lamp 210; Brightness 3000 ANSI Lumens; Contrast Ratio 3000:1; Keystone Correction $\pm 40^\circ$; Aspect Ratio 4:3; Speakers 10Wx1; Input Signal Video NTSC M (3.58 MHz), 4.43MHz PAL (B, D, G, H, I, M, N, 60) SECAM (B, D, G, K, K1, L) 480i and 576i 480p and 576p 720p,1080i; Sync H/V separated, Frequency Fh: 31-100KHz; Fv: 48-120Hz; RGB Input 2x15-pin mini D-sub, RGB Output 1x15-pin mini D-sub, Composite Video 1xRCA jack, S Video 1x4-pin mini-DIN, Audio Input: 1x3.5mm mini jack(Microphone) / RCA x1; Output: 1x3.5mm mini jack, Control 1xRS-232 (9 Pin D-Sub)/ RJ45, Network RJ-45; Voltage 100~240VAC(Auto Switching), 50/60Hz (universal); Consumption 298W (Typical) / <1W (RGB out disable); Temperature 0°C - 40°C, Humidity 10% - 90% (non-condensing)	
5	Screen Projector	a. Manual Wall, Format 4:3, Diagonal size 100" / 150x200 cm	
		b. Manual Wall, Format 4:3, Diagonal size 100" / 150x200 cm	
		c. Manual Wall, Format 4:3, Diagonal size 100" / 150x200 cm, Surface: Matte White	
		d. Manual Wall, Format 4:3, Diagonal size 100" / 150x200 cm	
6	Printer Laserjet	a. Technology Electrophotographic/Laser; Memory 32 MB; Function Compact, Print, Wireless Networking; Interface Hi-Speed USB 2.0, Wireless; Print Speed Up to 20ppm, Print Resolution Up to 2400 x 600 dpi, Manual Duplex; Paper Input (Standard Tray) 150-sheet; Paper Handling Sizes A4, Letter, A5, A5(Long Edge), Executive, Legal, Folio, B5, Paper Output 50-sheet; Power Consumption Ready: 40W, Printing: 380W, Deep Sleep: 0.7W; Noise Level Printing 51dBA	
		b. Print Speed 20ppm (A4), First Page Out 10 seconds or less (ready mode), Memory Standard/Maximum 32MB, Print Language or PDL (Page Description Language) Host-based, Duty Cycle 10,000 pages, Print Resolution (dpi) Up to HQ 1200 technology (2400 x 600 dpi), Image Processing 200 MHz; Media Size A4 SEF, Letter SEF, Folio (8.5" x 13") SEF, Legal SEF, a5 SEF/LEF, B5 LEF, Executive LEF Width: 148 to 215.9mm Length: 148 to 355.6mm, Paper Input Capability 150 sheets, Paper Output Capability	

No	Nama Barang	Spesifikasi	Keterangan
		50 sheets, Connectivity USB2.0 Hi-Speed Wireless (IEEE 802.11b/g/n), Printer Features Toner Save Mode, N-up (2, 4, 9, 16 or 25), Poster (4, 9, 16, 25), Header/Footer (time & date and/or user ID), Watermarks, manual duplex printing, manual booklet printing	
		<p>c. Print speed black (normal, A4) : Up to 18 ppm, Print speed black (normal, letter) : Up to 19 ppm; First page out black (A4, ready) As fast as 8.5 sec; Recommended monthly page volume 250 to 1500; Duty cycle Up to 5000 pages; Resolution (black) Up to 400 x 600 x 2 dpi (600 dpi effective output); Paper trays, standard 1 (plus 10-sheet priority feed slot); Paper trays, maximum 1 (plus 10-sheet priority feed slot); Connectivity, standard 1 Hi-Speed USB 2.0, 1 WiFi 802.11b/g, Mobile printing capability, Network ready Standard (built-in WiFi 802.11b/g), Ports 1 Hi-Speed USB 2.0 1 WiFi 802.11b/g; Fax transmission speed 6.4 B(A); Control panel 3 LED indicator lights (Wireless, Attention, Ready), 2 buttons (Wireless, Cancel), Memory Ram 8 MB; Paper handling input, standard 10-sheet priority feed slot, 150-sheet input tray, Paper handling output, standard 100-sheet output bin, Duplex Print Manual, Finished output handling Sheetfed, Media types Paper (laser, plain, photo, rough, vellum), envelopes, labels, cardstock, transparencies, postcards, Media sizes supported A4, A5, A6, B5, postcards, envelopes (C5, DL, B5), Envelope input capacity Connection and Communication, Supported media weight 60 to 163 g/m², Power consumption 370 watts (Printing), 2.7 watts (Ready), 2.0 watts (Auto-Off), 0.6 watts (Manual-Off), Energy efficiency ENERGY STAR® qualified, Operating temperature range 15 to 32.5° C, Acoustic power emissions 6.4 B(A), Acoustic pressure emissions bystander (active, printing) 50 dB(A)</p>	
		<p>d. Standard Functions Print, Value Added Functions WPS, Mobile Print, NFC, Processor 400 MHz, Memory (Standard) 64 MB, Interface (Standard) Hi-Speed USB 2.0 / Wireless 802.11b/g/n, Power Consumption 310 W (Printing) / 1.9 W (Power Save) / 30 W (Ready), Noise Level Less than 50 dBA (Printing) / Less than 26 dBA (Ready), Max. Monthly Duty Cycle 10,000 Pages, Speed (Mono) Up to 20 ppm in A4 (21 ppm in Letter), First Print Out Time (Mono) Less than 8.5 seconds (From Ready Mode), Resolution Up to 1200 x 1200 dpi effective output, Duplex Print Manual, Input</p>	

No	Nama Barang	Spesifikasi	Keterangan
		Capacity (Cassette) 150 Sheets, Media Type (Cassette) Plain, Envelope, Labels, CardStock, Thick, Thin, Cotton, Colour, Preprinted, Recycled, Bond, Archive, Media Size (Cassette) A4 / A5 / Letter / Legal / Executive / Folio / Oficio / ISO B5 / JIS B5 / Envelope (Monarch, Com10, DL, C5) / Custom (76 x 127 mm - 216 x 356 mm / 3.0" x 5.0" - 8.5" x 14.0"), Media Weights (Cassette) 60 ~ 163 g/m ² (16 ~ 43 lb), Output Capacity 100-sheet Face Down	
		e. Printing Method Monochrome Laser Beam Printing; Print Speed A4: Up to 18ppm, Letter: Up to 19ppm, Print Resolution 600 x 600dpi, Print Quality with Image Refinement Quality 2400 (equivalent) × 600dpi, Warm-Up Time (From Power On) 10secs. or less, First Printout Time (FPOT) Approx. 7.8secs. Recovery Time (From Sleep Mode) Approx. 1secs., Print Language UFR II LT, Paper Input (Standard) 150 sheets (based on 80g/m ²), Paper Output 100 sheets (face down) (based on 80g/m ²), Paper Size A4, B5, A5, Legal, Letter, Executive, 16K, Envelope COM10, Envelope Monarch, Envelope C5, Envelope DL, Custom: Width 76.2 to 215.9mm x Length 188 to 355.6mm, Paper Weight 60 to 163g/m ² , Paper Type Plain paper, Heavy Paper, Transparency, Label, Envelope.; USB Interface USB 2.0 High Speed; Operation Panel 2 LED Indicators, 2 Operation Key, Device Memory 32MB; Noise Level*4 During Operation: Sound Power Level: 6.53B or less, Sound Pressure Level: Approx. 49.3dB, During Standby: Sound Power Level: Inaudible, Sound Pressure Level: Inaudible, Maximum Power Consumption 840W or less, Average Power Consumption During Operation: Approx. 320W, During Standby: Approx. 1.8W, During Sleep: Approx. 0.8W, Energy Star TEC (Typical Electricity Consumption) 0.48kWh/week, Operating Environment Temperature: 10~30°C, Humidity: 20% to 80% RH (no condensation), Power Requirement 220 - 240V (±10%), 50 / 60Hz (±2Hz); Monthly Duty Cycle Up to 5,000 pages	
7	Print Scan Deskjet	a. A4, 4800 x 1200 dpi, Black/White 8.9 ipm Print, Color 5.2 ipm Print, 1200 x 2400 dpi Scan, Color 3.4 ipm Copy, Fax, ADF, USB	
		b. A4, 4800 x 1200 dpi, Black/White 20 ppm Print, Color 16 ppm Print, 1200 dpi Scan, Black/White, 600 x 300 dpi Copy, 300 x 300 dpi Fax, Tray 1# 100, USB, Wifi	
		c. A4, 1440 x 720 dpi, Black/White 34 ppm Print, 1200 x 2400 dpi Scan, Black/White 34 ppm Copy, Tray 1# 100, ADF, Ethernet, USB	

No	Nama Barang	Spesifikasi	Keterangan
		d. A4, 1200 x 6000 dpi, Black/White 27 ppm Print, Color 10 ppm Print, 1200 x 2400 dpi Scan, Copy, Fax, 1# 100 Tray, ADF, Wireless, USB	
8	Portable Amplifier	a. Sumber Daya : 220V AC, 50/60Hz atau 8x Baterai D-Size atau DC Eksternal 10-16VDC; Konsumsi Daya : AC : 44W, DC : 1,200 mA; Daya Keluaran : 15W dengan AC (Max. 20W), Ketahanan Baterai : Baterai kering (non-alkaline) ±1.5 Jam pada Volume 7 (dgn modul terpasang), Tanggapan Frekuensi : 70Hz - 10KHz (±3dB), Distorsi : Kurang dari 3% (pada output rated), Masukan (Input) Mikropon : (Mic 1, Mic 2, Mic 3) -54 dBV, 600 Ω, (Mikropon Wireless 1 atau 2 tidak akan berfungsi apabila Mikropon Kabel 1 atau 2 digunakan), Masukan (Input) AUX : -20 dBV, 500 K Ω, Keluaran (Output) : Eksternal Speaker : 8 - 16Ω lebih dari 20W pada output rated. Penggunaan "speaker eksternal dan speaker internal" atau hanya speaker eksternal (dipilih melalui SPEAKER SWITCH), LINE OUT : 0 dBV, 600 Ω, S/N : Lebih dari 70dB (pada output rated), Antenna : Rod Antenna, Kaset Unit Reproduction system : Non-Reverse (One Way), Track System : 2 Track / 1 Channel (Monoural), Metode Perekaman : AC bias, Metode Penghapusan : AC erasure, Kecepatan Kaset : 4.8 cm/s, WOW dan Flutter : 0.4% WRMS, Waktu untuk F.FWD / REW : kira-kira 100 detik (C-60), Model Tuner : ZTU-G800 / ZTU-G810, MP3 Unit : Slot USB : 1.1 dan 2.0 (Full Speed) -- Max. 32GB (FAT 16 & FAT 32), Format Audio : MP3 dan WMA, Internal Speaker : 20 cm, 2-Way Speaker, Temperature ambient : (AC) -10 to +40°C, (DC) 0 to +40°C, Warna: Putih Abu-Abu Muda (Material : ABS resin), Berat Unit : 8.3 kg (tanpa baterai), Dimensi (W x H x D) : 336 x 456 x 200 mm3,	
		b. All-in-One Portable Wireless System Features : USB Slot for Music Playing & VHF Wireless Microphone System, USB Slot for connecting iPod, MP3 Player, Flash Disk, VHF Wireless Microphone System, Full Featured DVD Player, Video Output, Cassette Deck / Tape Player + Recorder, Echo, Delay, Bass, Treble and Volume Controls, Dynamic Wireless Mic (Handheld Wireless, Clip-on Wireless, HeadSet Wireless), Operation Range : 55 metres in open area, Unit Powered by Internal Rechargeable Battery Pack, Audio Input : 2-Mic 1/4" and 1 Stereo RCA Aux Line Input, 1/4" Line Out, External Speaker Output, LED Indicators : Battery Charge, Low Battery, Power, 1 x 8-inch Woofers and 2.5-inch Compression Tweeter, 75W-RMS, Unit Back-up Battery Life : Approx. 6-hours, Mic Battery Life :	

No	Nama Barang	Spesifikasi	Keterangan
		<p>Approx. 4-hours, Ported Enclosure for Increased Bass Response, Telescoping Handle and Caster Wheels, Operating Frequency : VHF 225-285 MHz, Voltage : 220V 50/60Hz , Voltage Switchable, Specifications: Frequency Range : VHF 225 – 285 MHz, Frequency Stability : $\pm 0.005\%$ quartz oscillation controlled, with temperature stabilizer, Modulation (Max) : $\pm 20\text{KHz}$, Frequency Response : 50Hz ~ 18KHz $\pm 3\text{dB}$, Hum & Noise : 100dB$\pm 3\text{dB}$ (RF=1mV), Dynamic Range : min 100dB, Distorsion : Less than 0.5% (at 5W), Built-in Rechargeable Battery : (12V, 5Amp); Specifications Wireless Receiver: Quartz Controlled Fixed Frequency Receiving Mode, Sensitivity: 10dB/μV/(S/N 60dB), Image and Spurious Rejection: Min 80dB, Output: unbalanced 250mV 600Ω, Receiver System: Dual Channels, Input Signal: Wired, Wireless MIC, Audio-in, Output Signal: Recording signal, Line-out, Power output: 75W(Max), Power Source: AC 220V or DC 12V, Current Consumption: max 4A, Specifications Wireless Microphone: Antenna: Built-in with noise terminator circuit (Handheld Microphone), Antenna (Body-pack Transmitter), Battery: DC9V, Current Consumption: 20mA, Power Output: 20mW, Spurious Emission: 45dB min</p>	
		<p>c. A complete all-in-one PA system; This extremely easy-to-use PA requires no audio background to operate; 8" powered loudspeaker with 40W class D amp provides plenty of volume for small gigs and parties; 4-channel mixer include 2 microphone preamplifiers; Bluetooth integration lets you wirelessly stream audio from your music player; Wireless ready for high-quality Behringer ULM digital wireless microphone systems; High-quality dynamic microphone with cable included; AC and battery operated with up to 12 hours continuous use per battery charge; 35mm (1.378") pole socket provides easy mounting option</p> <p>Specification</p> <p>Number of Speakers 1</p> <p>Speaker Drivers 1 x 8" LF, 1 x 1" HF</p> <p>Number of Mixer Channels 4</p> <p>Number of Mic Preamps 2</p> <p>EQ 2-band Channel EQ</p> <p>Inputs 2 x XLR Combo, 1 x Stereo</p> <p>Power Amp 40W (Class D)</p> <p>Microphone 1 x Handheld Dynamic</p> <p>Enclosure Material Polypropylene</p>	
9	Headset	<p>a. Headphones : 1) Impedance : 20 Ω , 2) Sensitivity : 108 \pm 2 dB, 3) Frequency range : 20 – 20, 000 Hz, 4) Rated power : 2 x 100 mW.</p>	

No	Nama Barang	Spesifikasi	Keterangan
		Microphone Specification : 1) Impedance : 3 k Ω , 2) Sensitivity : -45 ± 2 dB, 3) Directivity : omnidirectional, 4) Frequency response : 200-5000 H.	
		b. 1. Microphone : 9x7 /58 \pm 2dB 2. Impedance : 32 Ohm at 1 KHz 3. Sensitivity : 105dB/mW 4. Frequency response : 20~20,000Hz 5. Cord length : Approx.2~3M 6. Weight : Approx. 200g(without cord) 7. Menggunakan kabel : ulir atau swivel	
		c. USB Headset; Input Impedance: 20 Ohms; Sensitivity (headphone): 115dB +/-3dB; Sensitivity (microphone): -42dBV/PA +/- 3dB; Frequency response (Headset): 20Hz to 20kHz; Frequency response (Microphone): 100Hz to 6,500Hz; Cord length: 1.8 m (5.90 ft)	
		d. Frekuensi 40 - 18000 Hz ; Impedance 32 ohm ; Panjang Kabel 3m ; Kepekaan/Sensitivitas 109dB; Mic: Impedance : 2 ohm ; Mic Frequency : 80 - 15000 Hz ; •Pic-Up Pattern : Noise Cancelling ; Sensivity as per 121 TR 9-5 : -38 dBV/Pa; Wearing Style : Headband ; Connector : 2 x 3.5mm for desktop/laptop	
		e. Acoustic system Semi-open ; Magnet type Neodymium ; Frequency response: 20 - 20 000 Hz; Impedance: 32 Ohm ; Maximum power input: 100 mW ; Microphone cartridge: 4 mm ; Sensitivity: 106 dB ; Speaker diameter 32 mm; Type Dynamic; Sensitivity microphone 50-15000 Hz, -42+/- 3dB; Cable length 3 m; Connector 2 x 3.5 mm ; Type of cable Copper	
10	PC Speaker System	a. 5.1 Speaker System, 500 Watts RMS, THX®-Certified speakers; Speaker Satelit: Total Watts: 5 x 67 Watts RMS; 4, dapat dipasang ke dinding Subwoofer: Total Watts: 165 Watts RMS ; Ported, side-firing	
		b. 5.1 multimedia speaker system with an external independent amplifier, RMS 8Wx4+10W+38W; Speaker Satelit 8W x 4 W + 10 W RMS; Input sensitivity: 5.1IN: 450mV \pm 50mV, CE: 650mV \pm 50mV, PC/AUX: 700mV \pm 50mV; Optical: 600mV \pm 50mV; Subwoofer 38 W RMS: Input Sensitivity: 5.1IN: 550mV \pm 50mV, PC/AUX: 400mV \pm 50mV, Optical: 300mV \pm 50mV; Input / Output FM/ USB/ SD/ PC/ AUX/ Optical/ 5.1	
		c. 5.1 Speaker System, 123 Watts RMS; Sub-woofer speaker: 30Hz-120Hz; Center speaker: 150Hz-20kHz; Front speaker: 150Hz-20KHz; Surround speaker: 150Hz-20KHz;	

C4. LABORATORIUM KOMPUTER TEKNIK

No	Nama Barang	Spesifikasi	Keterangan
1	Personal Komputer	a. Intel Core i7-6700, 16GB DDR4, 2TB HDD, DVD±RW, VGA NVIDIA GeForce GTX 960 2GB, GbE NIC, WiFi, Win 10 64bit, LED 27	
		b. Intel Xeon E3-1246v3, 8GB (1x 8GB) DDR3, 1TB HDD SATA, DVD±RW, VGA NVIDIA Quadro K2200 4GB, Win7 Pro	
		c. Intel Core i7-6700, 16GB (2x8GB) DDR4, 2TB HDD, Blu-ray Drive, VGA AMD Radeon HD R9 370 4GB, Bluetooth, Win 10 Home 64bit, LED 23	
		d. Intel Xeon E3-1245v5, 8GB (2x4GB) DDR4, 1TB HDD, DVDRW, VGA Nvidia Quadro K620 2GB, Win 7 Pro 64bit, LED 21.5	
2	Laptop	a. Intel Core i7-5500U, 8GB DDR3L, 1TB HDD, GbE NIC, WiFi, Fingerprint, VGA Nvidia Quadro K260M 2GB, Camera, 15.6" FHD, Win8.1 Pro 64 bit	
		b. Intel Core i7-4610M, 8GB (2x4GB) DDR3L, 1TB SSHD with 8GB Flash, DVDRW, VGA AMD FirePro W4170M 2GB, NIC, Bluetooth, Wifi, 15.6" FHD, Win7 Pro 64bit	
3	Printer	c. A3, 4800 x 1200 dpi, 33/29 (BW/Color) ppm Print, 1200 dpi Scan, 33/29 (BW/Color) cpm Copy, Tray 1# 250, Fax, NIC, Wireless 802.11b/g, USB	
		d. A3, 1200 x 6000 dpi, Black/White 35 ppm Print, Color 27 ppm Print, 2400 x 2400 dpi Scan, Black/White 23 cpm Copy, Color 20 cpm Copy, Tray 1# 250, ADF, Fax, Wireless, LAN, USB	
4	UPS	a. Line-Interactive, 1200VA / 600W, 230V, UPS with AVR, Tower	
		b. Line-Interactive, UPS 1200VA/600W, PF 0.5, Single-phase, Tower	
		c. Line-Interactive, UPS 1100VA / 550W, 230V, PF 0.5, Single-Phase, Tower	
		d. Line interactive, UPS 1250VA, Auto restart while AC is recovering, Single-Phase, tower, USB	

C5. FURNITURE

No	Nama Barang	Spesifikasi	Keterangan
1	Meja Kelas 1/2 Biro	a. Menggunakan rangka Particle Board; Kaki meja terbuat dari Besi; Bentuk Minimalis. Ukuran P 120 X L 60 X T 75 cm	
		b. Menggunakan rangka kayu; Bentuk Minimalis dan elegant; Tahan lama, kuat dan kokoh. Ukuran w1200xd600xh750	
		c. Menggunakan rangka Particle Board; Bahan dilapisi melamine; Ukuran P 120 X L 60 X T 75 cm	
		d. Menggunakan rangka Particle Board; Ukuran P 120 X L 60 X T 75 cm	
2	Meja Komputer	a. Menggunakan rangka Particle Board; Dimension (P)80 x (L)60 x (T)75	
		b. Material : Particle Board density 680 kg/m ³ ; ukuran (W x D x H) : 70 x 74 x 75; Board Thickness : Top Table 30 mm, Modesty Panel 18 mm, Table Leg 30 mm / 18 mm, Top Table Profile : Half Rounded, Profiling Process : Soft Forming, Laminate Material : Decorative Paper Melamine Coated, Edging Material : Plastic Molding, Hardware : Imported from Germany	
		c. Menggunakan rangka Particle Board; Kaki meja terbuat dari Besi; Dimension (P) 95 x (L) 60 x (T) 75 Cm	
		d. Terbuat dari kayu; Terdapat keyboard tray; Dilapisi melamin; Dimension 74(w) x74(d) x75(h)	
3	Kursi Kuliah Lipat	a. Bahan memo table dengan plywood dan formica. Chrome plating.	
		b. Rangka kaki Chrome; Bahan dudukan Oscar/Fabric	
		c. Rangka: Pipa bulat, kaki belakang berbentuk "H", dilengkapi meja tulis dan rak buku; Finishing: Nickel Chrome Plating; Ketebalan Chrome: 12 Mikron; Dimensi: 1.040 x 210 x 490 (mm); Kubikasi: 0,11 M ³	
		d. Oscar/fabric, stacking chair, table, arm, rack	
4	Rak Buku Perpustakaan	a. Memiliki 12 rak khusus, Lemari ini digunakan untuk menyimpan berbagai buku, biasanya di letakkan di Perpustakaan. Lemari ini memiliki ukuran yang besar, ukurannya : H2220 x W1000 x D450 (mm)	
		b. Ukuran w 100 x d 040 x h 200; Jumlah Rak 4	
		c. Terbuat dari metal; Lemari dengan Tanpa Pintu; Tahan Api; Dimension H 183 x W 100 x D 30 cm; Jumlah Rak 5	
		d. Terbuat dari metal; Lemari dengan Tanpa Pintu; Tahan Api; Dimension H 200 x W 100 x D 38 cm; Jumlah Rak 4	
		e. Terbuat dari metal; Lemari dengan Tanpa Pintu; Tahan Api; Dimension H 1850 x W 950 x D 435 mm; Jumlah Rak 4	
		f. Dimension H 2000 x W 1000 x L 380; Bahan Lemari Metal; Tipe Pintu Tanpa Pintu; Jumlah Rak 4	
		g. Menggunakan rangka metal; Lemari dengan Tanpa	

No	Nama Barang	Spesifikasi	Keterangan
		Pintu; Lemari dengan Empat Rak; Lemari Kantor Tanpa Afron; Bentuk Minimalis dan elegant : Sehingga memberikan kesan premium; Powder Coating Germany Teknology (bukan cat air) sehingga tahan karat dan tahan gores; Side panel lebih tebal dan kokoh; Terdapat rangka konstruksi baru dibawah setiap laci lebih kokoh dan mampu menahan beban lebih berat; Spesial mekanisme sehingga laci tidak mudah anjlok; Hangmap terbuat dari full plat sampai keatas agar map tidak jatuh dan dokumen tidak berserakan. Dimension H 2000 x W 1000 x L 380	
5	Lemari Bahan Lab	a. Lemari Penyimpan Bahan Korosif ini digunakan untuk menyimpan bahan-bahan yang mudah menyebabkan korosif atau bersifat asam. - Dimensi (pxlxt) : (1092-1100) x (457-500) x (1651-1660) mm - Material : Mild Steel 0.8 mm - Material Panel / rak : Stainles steel plat 0.8 mm - Tahan lama & bahan kimia - Finishing : Coating epoxy resin, acid & chemical resistant (tahan asam, panas, air) - Kapasitas 20 Gallon - Double walled steel w/ air vent hole - Permanent hazard label at door (Label permanen/ sticker permanen) - Terdiri dari 2 daun pintu - Handle stainless steel lock - Terdiri dari 3 panel trap/ rak - Dilengkapi dengan saluran sirkulasi udara	

C6. PERALATAN PENDUKUNG

No	Nama Barang	Spesifikasi	Keterangan
1	Pendingin Ruang (AC) 2 PK	a. AC Split, 2 Pk, 24.200 - 24.600 Btu/h, 9.3 - 9.0 Btu/hW, 7.10 - 7.20 kW, pipa maks. 5 meter, biaya instalasi	
		b. AC Split, 2 Pk, 18000 Btu/h, 1760 W , QB Series Refrigerant R410A, Elegant standart model, Artistic design, 6 in 1 health, Turbo + rapid cooling, Double goldfin, Self diagnosis, pipa maks. 5 meter, biaya instalasi	
		c. AC Split, 2 Pk, 18000 Btu/h, 1690W,R410A Standard Series, Triangle Design, Allergy Care, Anti Bacteria Coating, Easy Clean, Full HD Filter, Fast Cool, Good Sleep, Single User Mode, pipa maks. 5 meter, biaya instalasi	
		d. AC Split, 2 Pk, 18000 Btu/h, 7.7 A, 1650W, EER 3.5, Gas 1/5", pipa maks. 5 meter, biaya instalasi	
		e. AC Split, 2 Pk, 18000 Btu/h, 1780 W , Filter udara anti bakteri, Mode deep sleep, Jet cool, pipa	

No	Nama Barang	Spesifikasi	Keterangan
		maks. 5 meter, biaya instalasi	
		f. AC Split, 2 Pk, 18000 Btu/h, 1750 W , Bravo 3 Series, Standart - R410, Auto Restart, Formaldehyde Filter, Turbo Mode, Temp Compensation, Lover Postion Memory, Compresor Inteligence Alert (CIA System), pipa maks. 5 meter, biaya instalasi	
		g. AC Split, 2 Pk, 17060 Btu/h, 1620 W , Easy Clean, Nano Platinum, Durable electronic metal housing, Auto Restart, pipa maks. 5 meter, biaya instalasi	
		h. AC Split, 2 Pk, 18000 Btu/h, Jetstream, Capacity cool 4.36, pipa maks. 5 meter, biaya instalasi	
		i. AC Split, 2 Pk, 24.200 - 24.600 Btu/h, 9.3 - 9.0 Btuh/hW, 7.10 - 7.20 kW, pipa maks. 5 meter, biaya instalasi	
2	Pendingin Ruang (AC) 1 PK	a. AC Split, 1 Pk, 9000 Btu/h, 10.98 Btuh/hW, 2.64 kW , pipa maks. 5 meter, biaya instalasi	
		b. AC Split, 1 Pk, 9000 Btu/h, 10.98 Btuh/hW, 800 W , Standart Series R410, Double Goldfin, pipa maks. 5 meter, biaya instalasi	
		c. AC Split, 1 Pk, 9000 Btu/h, 10.98 Btuh/hW, 750W, Full HD Filter, Fast Cool, Good Sleep, Single User Mode, pipa maks. 5 meter, biaya instalasi	
		d. Standard Basic, Power Source voltage : 220v/50Hz, CoolingCapacity : 1 PK, BTU Average : 9000, Power Consumption : 900 Watt , Current Ampere : 4,2 , Noise Level IN (High/ Med / Low) : 38/34, Refrigerant : R410A/490G, Noise Level OUT : 52 (1 PK), Auto Restart, Timer, E.E.R : 10	
		e. AC Split, 1 Pk, 9000 Btu/h, 4.2 A, 800W, EER 3.3, Gas 3/8", pipa maks. 5 meter, biaya instalasi	
		f. AC Split, 1 Pk, 8800 Btu/h, 895 W , Filter udara anti bakteri, Mode deep sleep, Jet cool, pipa maks. 5 meter, biaya instalasi	
		g. AC Split, 1 Pk, 9000 Btu/h, 900 W , Bravo 3 Series, Standart - R410, Auto Restart, Formaldehyde Filter, Turbo Mode, Temp Compensation, Lover Postion Memory, Compresor Inteligence Alert (CIA System), pipa maks. 5 meter, biaya instalasi	
		h. AC Split, 1 Pk, 9042 Btu/h, 790 W , Easy Clean, Nano Platinum, Durable electronic metal housing, Auto Restart, pipa maks. 5 meter, biaya instalasi	
		i. AC Split, 1 Pk, 9000 Btu/h, Jetstream, Capacity cool 2.64, pipa maks. 5 meter, biaya instalasi	
		j. AC Split, 1 Pk, 9000 Btu/h, 10.98 Btuh/hW, 2.64 kW , pipa maks. 5 meter, biaya instalasi	
3	Genset 100 KVA Silent	a. Engine Specs: Power Output Gens. [kW] : 80, Electrical Output Gens. [kVA] : 100, Speed [Rpm] / Frequency [Hz] : 1500 / 50, No of cylinders : 4 (in line), Displacement [l] : 4.76, Bore/Stroke [mm] : 108 / 130, Governor : Mechanical / Electrical, Compression Ratio : 19 : 1, Mean Effective pressure [bar] : 15.3, Cooling System : Water cooling with Radiator, Fuel Consumption [l/h] :	

No	Nama Barang	Spesifikasi	Keterangan
		<p>28.8 (100% Load), Oil Capacity [l] : 11</p> <p>Alternator Specs: Type [3 Phases, Single Bearing] : STAMFORD UC. I 274 C, Rated Output [kVA] : 100, Speed [Rpm] / Frequency [Hz] : 1500 / 50, Voltage [V] : 400, Insulation : Class H, Protection : IP 23</p> <p>Accessories: Radiator Cooling : as DEUTZ standard, Coolant Capacity [l] : 19.7, Digital Control Panel, consist of : DEEP SEA ELECTRONICS (DSE 4520 or depend, on request) Module, parameter : •Volt meter, •Auto Start Control, •Hour meter, •Speed Control, •Engine lube oil pressure gauge, •Engine coolant Temperature gauge; Ampere meter; Start key switch; Charging control lamp; Control fuse; System Volt. : 12 Volts, Set of Connection cables and Cable terminals; Exhaust System : Industrial exhaust silencer, Flexible Hose (compensator for the exhaust pipe); Baseframe : Steel Plate construction (include daily tank for 8hrs operation); Engine and Alternator Mounting : Rubber metal elements; Air Filters : Dry Type</p> <p>Scope of supply: Batteray , Clamp , Cable Control panel AC / DC Daily tank Muffler CoO / Certificate Of Origin Test reports of generator Manual book Standard Toolkit</p>	
	b.	<p>Engine Specs: Power Output Gens. [kW] : 80, Electrical Output Gens. [kVA] : 100, Speed [Rpm] : 1500, Frequency [Hz] : 50, No of cylinders : 4L, Displacement [l] : 4.41, Bore/Stroke [mm] : 105 / 127, Compression Ratio : 18.2 : 1, Governor : Electrical, Cooling System : Water cooling with Radiator, Fuel Consumption [l/h] : 22.6 (100% Load), Oil Capacity [l] : 8</p> <p>Alternator Specs: Type [3 Phases, Single Bearing] : STAMFORD UCI274C; Rated Output [kVA] : 100, Standby AMP : 159, Speed [Rpm] / Frequency [Hz] : 1500 / 50, Voltage [V] : 400/230, Insulation : Class H, Protection : IP 23, Excitation : Brushless,</p> <p>Accessories: Radiator : standard; Coolant Capacity : 12.6 L; Digital Control Panel, consist of : DEEP SEA ELECTRONICS (DSE 7320 or depend on request) Module, parameter : •Volt meter, •Auto Start Control (AMF), •Hour meter, •Speed Control, •Engine lube oil pressure gauge, •Engine coolant (Temperature gauge) , •Low Fuel Level; Ampere meter; Start key switch; Charging control lamp; Control fuse; Emergency Stop Button Batteries [Ah] : 24Volts Exhaust System : Industrial exhaust silencer Air Filter : Dry Type Engine and Alternator Mounting : Rubber metal elements</p>	

No	Nama Barang	Spesifikasi	Keterangan
		Scope of supply: Batteray , Clamp , Cable Control panel AC / DC Daily tank Muffler CoO / Certificate Of Origin Test reports of generator Manual book Standard Toolkit	